Cumulative Assessments on UNIT 1

Cumulative Assessment 1 On lesson 1 unit 1

1. Choose the correct answer.

a. In the equation : $8{,}100 \div 25 = 324$, the quotient is ______

A. 8,100 B. 25 C. 324 D. zero

b. $5{,}262 \div 57 = 92$ R ______

A. 18 B. 57 C. 92 D. 0

c. If the price of 15 same books is 3,645 L.E. , then the price of each one is ______ L.E.

A. 234 B. 243 C. 324 D. 423

d. Marwan saves 45 L.E. weekly. After how many weeks will he save 720 L.E. ?

A. 32,400 B. 765 C. 16 D. 675

e. $3{,}548 \div 23 =$ ______ R 6

A. 154 B. 23 C. 514 D. 6

f. $984 \div 5 =$ ______

A. 196 R 0 B. 5 R 4 C. 196 R 4 D. 196 R 5

2. Which situations in value division ?

a. There are 2,880 kilograms of oranges. A worker separates the oranges into boxes of 40 kg. How many boxes will be made ?

b. There are 12 bags of fava beans. Each bag has a mass of 3 kilograms. What is the total mass of the fava beans ?

c. Fatma feeds her cat $\frac{1}{8}$ of a kilogram of cat food each day. How many days will 4 kg. of cat food last ?

d. Manal has $2\frac{1}{2}$ hours to complete her schoolwork. She finishes her math in $\frac{3}{4}$ of an hour. How much time remains for the rest of her schoolwork ?

e. Nader has 8 liters of fruit juice. If he drinks $\frac{1}{4}$ L of juice each day , how many days will it take him finish all the juice ?

3. A merchans paid 5,160 L.E. to buy 24 boxes of mango. Find the price of each box.

______

______

Cumulative Assessment 2 Till lesson 2 unit 1

1. Complete the following.

a. The L.C.M of 5 and 7 is ....

b. $8,529 \div 25 = 341$ R ....

c. The common factor of all numbers is ....

d. In the opposite venn diagram the G.C.F is ....



e. The divisor in the equation : $16,692 \div 52 = 321$ is ....

2. Choose the correct answer.

a. .... is a multiple of any number.

A. 3 B. 2 C. 1 D. 0

b. In the equation : $2,150 \div 25 = 86$, the remainder is ....

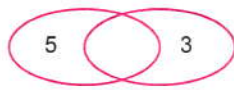
A. 0 B. 25 C. 86 D. 2,150

c. Which of the following are relatively prime numbers ? ....

A. 4 and 8 B. 12 and 18 C. 2 and 12 D. 9 and 4

d. In the opposite Venn diagram the L.C.M is ....

A. 0 B. 1 C. 15 D. 8



e. $2,574 \div 7 =$ ....

A. 376 R 5 B. 367 R 5 C. 367 D. 376

3. Find G.C.F and L.C.M of 12 and 18 by two methods.

....

....

....

4. A factory produces 875 pieces of cloth weekly.
How many pieces did the factory produce daily ?

....

....

Cumulative Assessment 3 Till lesson 3 unit 1

1. Choose the correct answer.

a. $20 + 25 =$ ______

A. $2(0 + 5)$ B. $5(5 + 2)$ C. $5(4 + 5)$ D. $20(0 + 5)$

b. $13{,}510 \div 23 = 587$ R ______

A. 9 B. 8 C. 7 D. 6

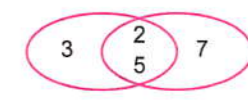
c. Youssef saves 105 L.E. weekly. How much did he save daily ?

A. 15 B. 98 C. 735 D. 112

d. From the opposite Venn diagram , the expression is ______

A. $10(6 + 35)$ B. $3(10 + 7)$

C. $7(10 + 3)$ D. $10(3 + 7)$



2. Complete the following.

a. $6(7 + 9) = 42 +$ ______

b. $5 \times 3 + 5 \times 7 = 5($ ______ $+$ ______ $)$

c. $26{,}900 \div 43 =$ ______

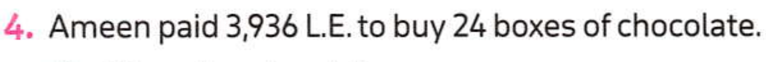
d. The common multiple of all numbers is ______

3. Lara has 24 pens and 16 rules. She wants to put them in groups. What is the greatest number of groups that can be made so that each group has the same number of items ? How many pens will be in each group ? How many rules will be in each group ? and write the expression which represents the total number of items.

______

______

______



4. Ameen paid 3,936 L.E. to buy 24 boxes of chocolate.
Find the price of each box.

______

______

Cumulative Assessment  Till lesson 4 unit 1

1. Complete the following.

a. The L.C.M of 5 and 10 is ....

b. $5 - 2\frac{1}{3} =$ ....

c. Youssef works 210 hours monthly, then he works .... hours daily.

d. $4\frac{1}{7} + 2\frac{1}{2} =$ ....

e. $60 + 90 = 30$ (............ + ...)

f. $2\frac{1}{5} - 1\frac{1}{2} =$ ....

2. Choose the correct answer.

a. $\frac{2}{7} + \frac{1}{7} + \frac{5}{7} + \frac{3}{7} =$ ....

A. $\frac{11}{28}$ B. $1\frac{4}{7}$ C. $\frac{11}{14}$ D. $\frac{10}{7}$

b. $8 (3 + 5) =$ ....

A. $24 + 13$ B. $3 (8 + 5)$ C. $24 + 40$ D. $11 + 13$

c. Which of the following are relatively prime numbers?

A. 8 and 9 B. 7 and 14 C. 2 and 3 D. 10 and 5

d. The G.C.F from the opposite Venn diagram is ....



A. 5×2 B. 5×3 C. 7×2 D. 2×3

e. $\frac{5}{6} - \frac{3}{4} =$ ....

A. $\frac{1}{2}$ B. $\frac{8}{10}$ C. $\frac{1}{12}$ D. $\frac{1}{24}$

3. Samir ate $\frac{1}{4}$ of the cake and Seif ate $\frac{1}{3}$ of the same cake.

How much of the cake has been eaten?

....

....

4. Use Venn diagram to find G.C.F and L.C.M of:

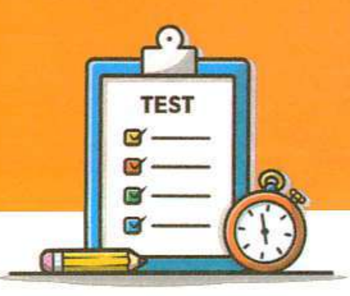
a. 15 and 10

....

b. 27 and 4

....

Unit One Assessment



1. Choose the correct answer.

1. The G.C.F of 15 and 30 is ....

   A. 15 B. 30 C. 5 D. 3

2. $24 + 16 =$ ....

   A. $16 (2 + 1)$ B. $8 (3 + 2)$ C. $2 (12 + 6)$ D. $4 (6 + 12)$

3. $840 \div 35 =$ ....

   A. 23 B. 24 C. 18 D. 16

4. $3\frac{1}{2} + 4\frac{3}{4} =$ ....

   A. $8\frac{1}{2}$ B. $7\frac{4}{7}$ C. $7\frac{4}{6}$ D. $8\frac{1}{4}$

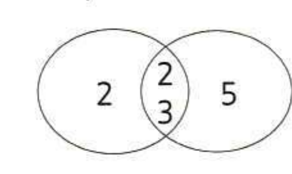
5. L.C.M of 7 and 14 is ....

   A. 0 B. 1 C. 7 D. 14

6. $\frac{2}{7} + \frac{1}{7} + \frac{3}{7} + \frac{4}{7} =$ ....

   A. $\frac{7}{9}$ B. $1\frac{2}{7}$ C. $1\frac{3}{7}$ D. $1\frac{4}{7}$

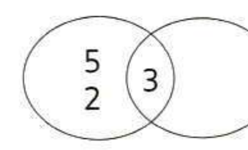
7. The opposite Venn diagram represent prime factorization of two numbers then G.C.F of them = ...



   A. 2 B. 4
   C. 6 D. 10

2. Complete.

1. $\frac{3}{5} + \frac{1}{4} =$ ....
2. $8 + 12 = 4 ($........ $+$ ....$)$
3. .... is a multiple of any number.
4. The opposite Venn diagram represent prime factorization of two numbers then G.C.F of them = ...



5. $2,253 \div 53 =$ ....
6. $5\frac{2}{3} - 2\frac{1}{4} =$ ....
7. $7 (2 + 5) = 14 +$ ....
8. The common factor for all number is ....

3. Choose the correct answer.

1. Which of the following are relatively prime numbers ?

   A. 4 and 6 B. 8 and 15 C. 8 and 18 D. 8 and 24

2. The L.C.M of 6 and 10 = ______

   A. 6 B. 2 C. 20 D. 30

3. $20 + 40 =$ ______

   A. $20 (0 + 20)$ B. $20 (1 + 2)$ C. $20 (0 + 2)$ D. 20

4. $1\frac{1}{6} - \frac{2}{3} =$ ______

   A. $1\frac{1}{3}$ B. $1\frac{2}{3}$ C. $\frac{1}{2}$ D. $\frac{1}{4}$

5. The opposite Venn diagram represent prime factorization of two numbers then G.C.F of then = ______



   A. 0 B. 6 C. 42 D. 1

6. $45 + 27 = 9 ($______$)$

   A. $9 + 3$ B. $5 + 3$ C. $9 - 3$ D. $4 + 2$

7. $\frac{1}{4} + \frac{1}{5} =$ ______

   A. $\frac{2}{9}$ B. $\frac{9}{5}$ C. $\frac{9}{20}$ D. $\frac{1}{20}$

4. Answer the following questions.

1. A merchant paid 5,287 L.E. to buy 17 boxes of apple. **Find the price of each box.**

   ______

2. Find L.C.M and G.C.F of two numbers 24 and 30 by using Venn diagram.

   ______

3. If Khaled has 28 pieces of apple and 35 pieces of banana, what is the greatest number of bags he can prepare with no pieces left over ?
   Write the expression which represents the total number of fruits.

   ______

4. Fatema found the packages of bananas. She opened 4 packages each package contains 8 and use some to make some banana pudding. This what remains of banana packages. $\frac{3}{8}, \frac{5}{8}, \frac{2}{8}, \frac{6}{8}$.

   a. If you were to regroup the bananas into full packages, how many full packages could be made from the remaining bananas ?

   ______

   b. How much in terms of whole packages did Fatema actually use?

   ______

Cumulative Assessments on UNIT 2

Cumulative Assessment 5 Till lessons (1 & 2) unit 2

1. Choose the correct answer.

a. The smallest natural number is ....

A. – 2 B. – 1 C. 0 D. 1

b. The opposite of the number -8 is ....

A. – 8 B. 8 C. 0 D. -7

c. The greatest negative integer is ....

A. – 1 B. – 2 C. – 3 D. – 4

d. Which of the following is an integer?

A. $\frac{15}{2}$ B. $\frac{15}{3}$ C. $\frac{15}{4}$ D. $\frac{15}{6}$

e. Wael deposit of 1,000 L.E. in a bank represents as ....

A. 1,000 B. – 1,000 C. 100 D. – 100

f. Which of the following is nearest to zero? ....

A. – 4 B. 4 C. – 3 D. 2

2. Complete the following.

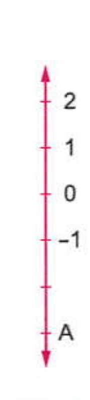
a. The smallest non-negative integer is ....

b. The G.C.F of 4 and 8 is ....

c. The number of integers between -2 and 3 is ....

d. The opposite of zero is ....

e. In the opposite number line,
the integer which represents A is ....



f. 17,834 ÷ 74 = ...

3. Arrange the following integers from least to greatest.

a. – 6 , 0 , – 4 , 4 , – 7 , 3

....

b. 7 , – 7 , – 3 , – 5 , 11 , – 11

....

4. Find the G.C.F and L.C.M of 35 and 42 by using Venn diagram.

....

....

Cumulative Assessment 6 — Till lesson 3 unit 2

1. Choose the correct answer.

a. The number -1.5 in the form $\frac{a}{b}$ is ....

A. $-\frac{1}{5}$ B. $-\frac{5}{1}$ C. $-\frac{15}{10}$ D. $-5\frac{1}{10}$

b. The best subset for the number 4 is ....

A. counting number B. natural number

C. integers D. rational number

c. The smallest positive integer number is ....

A. 3 B. 2 C. 1 D. 0

d. $\frac{1}{4}+\frac{2}{4}+\frac{3}{4}+\frac{2}{4}=$ ....

A. 2 B. 1 C. $\frac{7}{8}$ D. $\frac{5}{8}$

e. Which of the following is the greatest number ? ....

A. -2.7 B. -7.2 C. -1.2 D. -2.1

f. The G.C.F of 4 and 9 is ....

A. 1 B. 4 C. 9 D. 36

2. Write "a subset" or "not a subset".

a. Set of counting numbers is .... of set of rational numbers.

b. Set of natural numbers is .... of set of counting numbers.

c. Set of rational numbers is .... of set of integers.

d. Set of integers is .... of set of rational numbers.

3. Write "belongs" or "does not belong" :

a. 0 .... to set of rational numbers.

b. $|-7|$ .... to set of natural numbers.

c. $2\frac{1}{2}$ .... to set of integers.

d. $\frac{15}{3}$ .... to set of counting numbers.

4. A factory produces 92 pieces of cloth daily.
How many days does it produce 4,876 pieces of cloth ?

....

....

Cumulative Assessment 7 — Till lesson 4 unit 2

1. Choose the correct answer.

a. The rational number between -2.5 and -2.4 is ________

A. -2.53 B. -2.43 C. -2.3 D. -2.32

b. In the equation : $2,595 \div 8 = 324$ R 3 , the remainder is ________

A. 2,595   B. 8   C. 324   D. 3

c. $14 + 21 = 7\,(2 +$ ________ $)$

A. 3   B. 21   C. 4   D. 147

d. The opposite of zero is ________

A. -1 B. 1   C. 0   D. has no opposite.

e. The number $-2\frac{1}{4}$ in the form $\frac{a}{b}$ is ________

A. $-\frac{4}{9}$ B. $-\frac{9}{4}$ C. $-\frac{7}{4}$ D. $-\frac{21}{4}$

2. Write the correct sign "< , = or >".

a. -3 ☐ -7

b. $4\frac{1}{2}$ ☐ 5

c. $-\frac{1}{2}$ ☐ 0

d. $-\frac{7}{5}$ ☐ $-1\frac{2}{5}$

e. 0.4 ☐ -0.5

f. -12 ☐ -4

g. 0 ☐ -2

h. 2.5 ☐ 2.47

3. Find two rational numbers lying between :

a. 2.4 and 2.5

____

b. $-\frac{3}{5}$ and $-\frac{1}{2}$

____

4. Arrange the following from greatest to least.

$$3 , -\frac{7}{2} , \frac{5}{2} , 3\frac{1}{4} , 0 , -11$$

____

____

Cumulative Assessment  Till lessons (5 & 6) unit 2

1. Complete the following.

a. The opposite of $\left|-\frac{1}{2}\right|$ is ....

b. If $|x| = 4$, then $x =$ .... or ....

c. The smallest counting number is ....

d. The number of integers between -4 and zero is ....

e. $|-2| \times |0| =$ ....

f. $15{,}015 \div 15 =$ ....

2. Choose the correct answer.

a. $|-2.71|$ 2.7

A. $<$ B. $>$ C. $=$

b. If $|-99| = x$, then $x =$ ....

A. -99 B. 99 C. -9 D. 9

c. $|-11| >$ ....

A. 10   B. 11   C. 13   D. 101

d. The distance between -4 and its opposite on the number line is .... unit[s]

A. zero   B. 4   C. 8   D. 16

3. In a lab, there are two freezers at different temperatures to preserve meat.

Freezer A is $-1°C$ and Freezer B is $-5°C$

a. Which integer is greater?

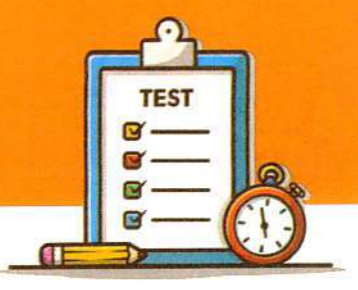
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b. Which temperature is colder? Explain how you know.

....

....

Unit Two Assessment



1. Choose the correct answer.

1. Which of the following is an integer?

   A. 3.75 B. $-\frac{3}{7}$ C. $\frac{7}{7}$ D. $2\frac{1}{2}$

2. The smallest natural number is ______

   A. $-1{,}000$ B. -1 C. 0 D. 1

3. $-\frac{3}{4} \bigcirc -\frac{1}{2}$

   A. $>$ B. $<$ C. $=$

4. $|-8| >$ ______

   A. $|-9|$ B. $|-7|$ C. 9 D. 8

5. The opposite number of $-\frac{3}{8}$ is ______

   A. $-\frac{3}{8}$ B. $\frac{8}{3}$ C. $-\frac{8}{3}$ D. $\left|-\frac{3}{8}\right|$

6. The integer which comes just before -3 is ______

   A. -2 B. -4 C. -1 D. 0

7. The best subset for of the number -2 is ______

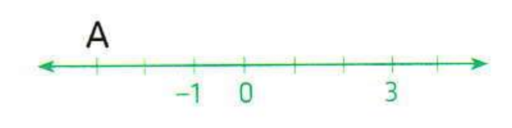
   A. a counting number B. an integer

   C. a natural number D. a rational number

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2. Complete the following.

1. $|-3| \times |-4| =$ ______
2. A negative number with an absolute value greater than 8 is ______
3. Absolute values of opposites are ______
4. The smallest positive integer number is ______
5. The integers between -4 and 1 are ______
6. $-3\frac{1}{4}$ in the form $\frac{a}{b}$ is ______
7. From the opposite number line the integer for point A is ______ and its opposite is ______



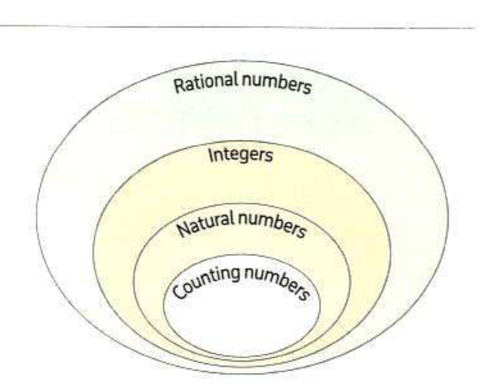
8. The number of integers between -5 and 2 is ______

3. Choose the correct answer.

1. The rational number between -3.1 and -3.17 is ______
   A. -3.2 B. 3.15 C. -3.14 D. -3.18
2. Which of the following is the greatest number?
   A. -10 B. $|-10|$ C. -11 D. 9
3. The set of counting numbers ______ the set of rational numbers
   A. belongs B. does not belong C. is a subset of D. is not a subset of
4. The additive inverse of $|-2|$ is ______
   A. 2 B. -2 C. $-\frac{9}{3}$ D. $-\frac{12}{4}$
5. $|-3|+|-2|=$ ______
   A. 5 B. -5 C. 6 D. 0
6. All integers are also ______ numbers.
   A. counting B. natural C. rational
7. -3 ______ set of natural numbers.
   A. belongs B. does not belong C. is a subset of D. is not a subset of

4. Answer the following questions.

1. Arrange in a descending order :
   -8 , $|-7|$, 2 , 0 , -5
   The order is : ______
2. Find a rational number lying between $\frac{3}{5}$ and $\frac{2}{3}$
   ______
3. Write the following numbers in the opposite Venn diagram.
   34 , $2\frac{1}{4}$, 0.225 , -10 , 0 , $\frac{-7}{8}$



4. Represent $-3\frac{1}{4}$ on the number line.
   ______

Cumulative Assessments on UNIT 3

Cumulative Assessment 9 Till lessons (1 & 2) unit 3

1. Choose the correct answer.

a. In the algebraic expression : $5x - 4 + 5m + 3$, the two like terms are ______

A. 3 and 5 m   B. 5 x and 5 m   C. 3 and – 4   D. 5 x and 3

b. All the following are integers except ______

A. – 4   B. $\frac{10}{5}$ C. $\frac{13}{5}$ D. $\frac{0}{5}$

c. The number of terms of the expression : $5 - 2m - 3m + 4$ is ______ terms.

A. 5   B. – 2   C. – 3   D. 4

d. The coefficient in the algebraic expression : $4x - 3$ is ______

A. 4   B. 4 x   C. – 3   D. x – 3

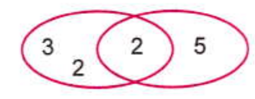
e. If the price of 12 pens of same kind is 414 L.E. , then the price of each one is ______ L.E.

A. 35.4   B. 426   C. 34.5   D. 34

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2. Complete the following.

a. In the opposite Venn diagram the G.C.F is ______



b. The constant in the expression $3y + 2x - 5$ is ______

c. The number of terms of the expression : $3 + 4z$ is ______

d. $18 + 12 = 6$ (______ $+ 2$)

e. The smallest counting number is ______

f. The opposite of $|-4|$ is ______

---

3. Write [numerical expression or algebraic expression] for each of the following :

a. $5(3 + 4)$ [______]

b. $2m - 3$ [______]

c. $5 - x + 3y$ [______]

d. $4 + (5 - 3) + 1$ [______]

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4. Order from greatest to least.

$$-\frac{7}{10}, \frac{3}{5}, 0.4, -\frac{4}{5}, \text{zero}$$

______

______

Cumulative Assessment 10 Till lesson 3 unit 3

1. Complete the following.

a. The verbal expression for "$2m - 7$" is ....

b. The number of integers between 4 and its opposite is .... integers.

c. The algebraic expression for "a number less 7" is ....

d. $|-4| + |-7| =$ ....

e. Ramy works x hours daily, then the algebraic expression for the number of worked hours monthly is ....

2. Choose the correct answer.

a. Twice the difference of a number and 5 is ....

A. $2y + 5$ B. $2y - 5$ C. $2(y + 5)$ D. $2(y - 5)$

b. Laila saved n L.E. and her mother gave her 5 L.E., she will have .... L.E.

A. $n - 5$ B. $n + 5$ C. $5n$ D. $5 - n$

c. Which of the following are like terms ?

A. $3x, 3y$ B. xy, yz C. $31x, 13x$ D. x, y

d. The distance between the opposite of 3 and 0 on the number line is .... unit(s)

A. 3 B. -3 C. 0 D. 6

e. The rational number between 0.3 and 0.4 is ....

A. 0.2 B. 0.42 C. 0.32 D. 0.432

f. Eslam is x years old now, how old will he be after 6 years ?

A. $x \div 6$ B. $6x$ C. $6 + x$ D. $x - 6$

3. From the opposite Venn diagram, complete :

Prime factors of m: 3, 3 | common: 2 | Prime factors of 70: 5, n

a. The value of m is ....

b. The value of n is ....

c. G.C.F is ....

d. L.C.M. is ....

4. Ahmed ate x sandwiches and his father ate 6 sandwiches. If the price of each sandwich is 5 L.E., write the algebraic expression to find the cost of all sandwiches.

....

Assessment 1 on Lesson 1

Unit 1

1 Complete the following:

ⓐ If $13 \times 35 = 455$, then $455 \div 13 =$ ....

ⓑ If $6{,}048 \div 24 = 252$, then $24 \times 252 =$ ....

ⓒ If $976 = 61 \times 16$, then $980 \div 61 = 16$, and the remainder is ....

ⓓ If $2{,}000 \div 54 = 37$ and the remainder is 2, then $54 \times 37 =$ ....

ⓔ The number that, if divided by 34, the quotient will be 102, and the remainder is 11, is = ...

2 Divide using the standard division algorithm:

ⓐ $6 \overline{)\ 258}$

 $42 \overline{)\ 1{,}134}$

 $5 \overline{)\ 9{,}528}$

3 Answer the following:

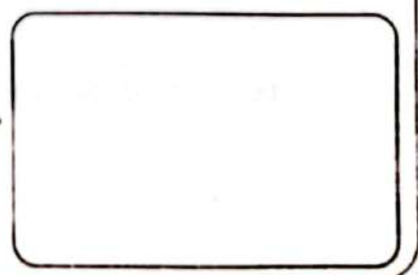
ⓐ A primary school has 24 classrooms,
each class has 50 pupils.
How many pupils does the school have?

....



ⓑ The number of rooms in one of the hotels reached 300.
These rooms are divided evenly over 12 floors.
How many rooms are there on each floor?

....



Assessment 2 on Lesson 2

Unit 1

1 Complete the following:

a Prime numbers greater than 10 and less than 20 are ....

b Prime factors of 18 are ....

c A number whose prime factors are 2, 3, 7 is ....

d The greatest common factor of any two prime numbers is ....

e The common multiple of all numbers is ....

2 Choose the correct answer:

a The greatest common factor of two relatively prime numbers is ....

(0 or 1 or their sum or product)

b The least common multiple of two relatively prime numbers is ....

(0 or 1 or their sum or their product)

c The greatest common factor of the numbers 10 and 9 is ....

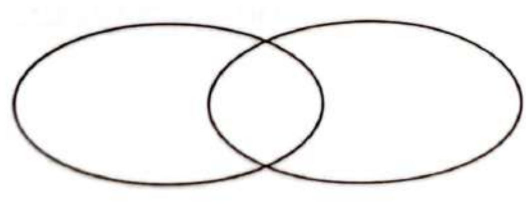
(0 or 1 or 4 or 5)

d 8 and .... are relatively prime numbers. (4 or 12 or 9 or 6)

e The two numbers .... are relatively prime numbers.

(2 and 4 or 4 and 6 or 6 and 9 or 9 and 4)

3 The GCF and LCM for the 16 and 12 using a Venn diagram:



GCF = ...

LCM = ...

16 = ...

12 = ...

Assessment 3 on Lesson 3

Unit 1

1 Choose the correct answer:

ⓐ $4 \times (2 + 9) =$ ....

($(4 \times 2) + (4 \times 9)$ or $4 \times 2 + 9$ or $4 \times 2 \times 9$ or $(4 + 2) \times (4 + 9)$)

ⓑ $(6 \times 3) + (6 \times 2) =$ ....

($6 \times 3 \times 2$ or $6 + (3 \times 2)$ or $6 \times (3 + 2)$ or $6 \times 3 \times 6 \times 2$)

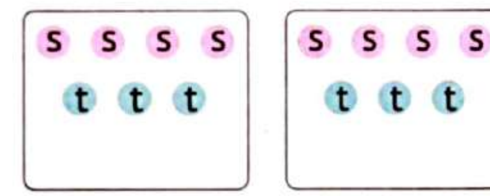
ⓒ .... $\times (5 + 1) = (7 \times 5) + (7 \times 1)$ (5 or 1 or 7 or 6)

ⓓ The GCF for 18 and 12, is .... (6 or 9 or 2 or 3)

ⓔ The common multiple of all numbers is .... (0 or 1 or 2 or 3)

2 Write the number expression for each of the following figures:

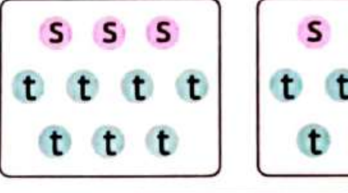
ⓐ



.... × (.............. + ...)



ⓑ



.... × (.............. + ...)

3 Sameh wanted to divide the 21 pens and 35 notebooks into groups, so that each group contained the same number of supplies. What is the largest number of sets that can be made for each type of supplies so that each set has the same number? How many pens are in each group? How many notebooks are in each group?

....

....

....

....

Assessment 4 on Lesson 4

Unit 1

1 Choose the correct answer:

ⓐ $\frac{3}{5} + \frac{9}{10} =$ .... $(\frac{1}{10}$ or $1\frac{1}{2}$ or $1\frac{1}{5}$ or $\frac{12}{15})$

ⓑ $1\frac{4}{5} + 2\frac{1}{3} =$ .... $(4\frac{2}{15}$ or $3\frac{2}{18}$ or $4\frac{5}{8}$ or $3\frac{5}{8})$

ⓒ $3\frac{1}{2} -$ .... $= 1\frac{3}{8}$ $(2\frac{5}{8}$ or $1\frac{1}{8}$ or $1\frac{5}{8}$ or $2\frac{1}{8})$

ⓓ $3\frac{5}{6} + 1\frac{1}{3} = 4 +$ .... $(2$ or $1\frac{1}{6}$ or $2\frac{2}{6}$ or $4\frac{2}{3})$

2 Complete the following:

ⓐ .... $- 1\frac{2}{3} = 2\frac{1}{2}$

ⓑ $2\frac{1}{2} - 1\frac{7}{8} =$ ....

ⓒ $2\frac{1}{3} + 1\frac{1}{4} =$ ....

3 Answer the following:

ⓐ Hanaa has $15\frac{1}{2}$ pounds , She bought a ruler for $4\frac{1}{2}$ pounds and a pen for $5\frac{1}{2}$ pounds. How much money is left with Hanaa?

....

....

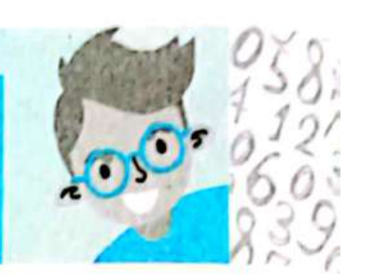
ⓑ You buy a package of dates containing 16 dates. You had already eaten one when you remembered that you owed your friend half a packet of dates.

[1] What fraction represents the number of fruits that you have to give to your friend? ....

[2] After giving your friend his share, what fraction is the remaining amount of the fruit packet? ....

1 Assessments on Units

Assessment on Unit 1



First: **Choose the correct answer:**

a) If $12 \times 34 = 408$, then $408 \div 12 =$ .... (12 or 34 or 408 or 36)

b) If $574 = 41 \times 14$, then $580 \div 41 = 14$, and the remainder is ....

(14 or 41 or 6 or 16)

c) A number that, if divided by 8, the quotient will be 16, and the remainder is 3. (131 or 128 or 19 or 24)

d) .... is a factor of all numbers. (0 or 1 or 2 or 3)

e) 7, 5, 3, and 2 are .... numbers. (even or odd or prime or otherwise)

f) The greatest common factor of any two prime numbers is ....

(0 or 1 or their sum or their product)

g) The least common multiple of two prime numbers is ....

(the greatest number or 1 or their sum or their product)

h) $6 \times (7 + 5) =$ ....

($(6 \times 7) + (6 \times 5)$ or $6 \times 7 + 5$ or $6 \times 7 \times 5$ or $(6 + 7) \times (6 + 5)$)

i) $(2 \text{ X } 8) + (2 \text{ X } 3) =$ ....

($2 \times 8 \times 3$ or $2 + (8 \times 3)$ or $2 \times (8 + 3)$ or $2 \times 8 \times 2 \times 3$)

j) $1\frac{3}{4} + 2\frac{1}{2} =$ .... ($4\frac{1}{4}$ or $3\frac{1}{4}$ or $3\frac{4}{6}$ or 4)

Second: **Complete the following:**

a) If $1,050 \div 12 = 87$, and the remainder is 6, then $12 \times 87 =$ ....

b) If $351 \div 27 = 13$, then $13 \times 27 =$ ....

c) The prime number has .... factor(s).

d) All prime numbers are odd numbers, except .... is an even number.

e) .... is the smallest prime number.

f) Any two numbers are relatively prime numbers if their greatest common factor is ....

g) The least common multiple of any two prime numbers is ....

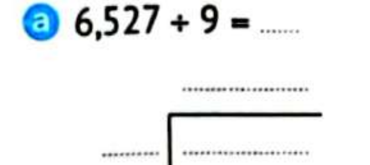
h) $8 \times (2 + 7) = (\ldots \times \ldots) + (\ldots \times \ldots)$

i) $3\frac{1}{5} + \ldots\ldots\ldots = 5\frac{1}{2}$

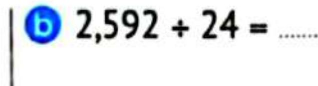
Third: Answer the following:

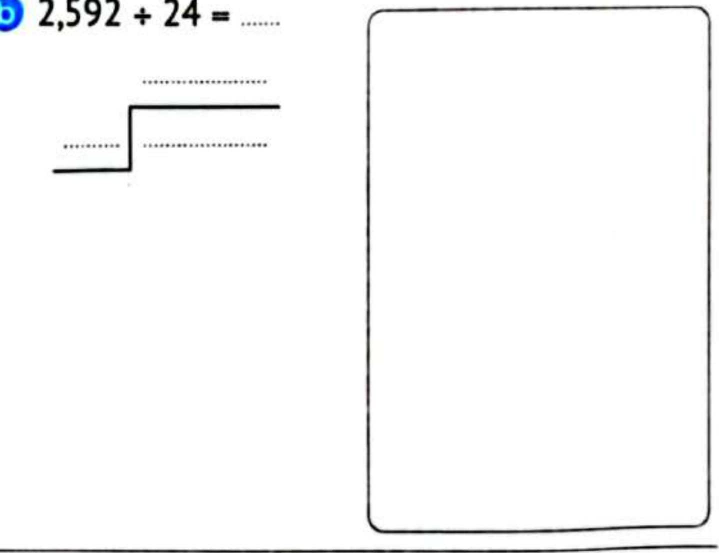
1 Find the result:

a) $6{,}527 \div 9 = \ldots$



b) $2{,}592 \div 24 = \ldots$





c) $5\frac{3}{8} + 2\frac{5}{6} = \ldots\ldots\ldots$

d) $7\frac{1}{4} - 3\frac{3}{5} = \ldots\ldots\ldots$

2 A compound consists of 840 housing units, each building within this compound consists of 15 housing units.

How many buildings in this compound?

....

Assessment 1 on Lessons 1&2

Unit 2

1 Choose the correct answer:

a The integer that expresses (the depth of a well of 5 meters) is ....

(−5 or 5 or −10 or 10)

b An integer between the numbers 2 and −2 is .... (−1 or −3 or 3 or −4)

c The number that comes just after −9 is .... (−10 or −8 or 10 or 8)

d −25 ☐ −12 (> or = or <)

e 6 < .... (−8 or 8 or −9 or −7)

2 Complete the following:

a The integer that expresses "move forward 6 steps" is ....

b Integers between −3 and 2 are ....

c The additive inverse of 8 is ....

d The smallest positive integer is ....

e −5 , −4 , −3 , −2 , ... , ... , ... , ...

3 Arrange the following integers in an ascending order:

−3 , 9 , −32 , 0 , 2

.... , ... , ... , ... , ...

4 Locate each of the following points on the number line:

Point	A	B	C	D	E
Number	0	3	−2	5	−3

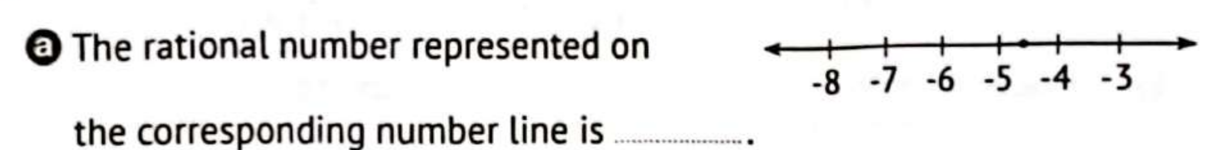
0

Assessment 2 on Lessons 3&4

Unit 2

1 Choose the correct answer:

ⓐ The rational number represented on the corresponding number line is ....



($4\frac{1}{2}$ or $5\frac{1}{2}$ or $-5\frac{1}{2}$ or $-4\frac{1}{2}$)

ⓑ –2 is a / an ....

(counting number or natural number or negative integer or odd number)

ⓒ All integers are .... numbers.

(counting or natural or even or rational)

ⓓ The additive inverse of - 5 is .... (5 or –5 or $-\frac{1}{5}$ or $\frac{1}{5}$)

ⓔ $-2\frac{3}{4}$ is between the two whole numbers ....

(2,3 or 1,2 or –2, – 3 or –1, –2)

2 Complete each of the following:

ⓐ The additive inverse of 5.9 is ....

ⓑ The rational number –5.6 lies between the two whole numbers .... and .... on the number line.

ⓒ All natural numbers are .... numbers and .... numbers.

ⓓ –2.5 in the form $\frac{a}{b}$ is .... (In its simplest form)

ⓔ $-\frac{7}{4}$ in the decimal form is ....

3 Arrange the following numbers in a descending order:

7.7 , 7 , -3.8 , $7\frac{1}{2}$, $-3\frac{1}{5}$

.... , ... , ... , ... , ...

Assessment 3 on Lessons 5&6

Unit 2

1 Choose the correct answer:

a) $|-1.5| =$ .... (1.5 or −1.5 or 15 or −15)

b) $|6| =$ .... (6 , or −6 or 3 or −3)

c) The absolute value of 2.7 is................. . (−2.7 or 2.7 or 27 or −27)

d) The absolute value of "zero" is .... (10 or 0 or −1 or 1)

e) The larger the absolute value, the .... zero.

(closer number to or farther number to or equal number to)

2 Complete the following:

a) If $5 = |m|$, then m = ... or ....

b) If $k = |-3.5|$, then k = ...

c) If $k = |9|$, then k = ...

d) Opposite numbers on a number line have the .... absolute values.

e) .... is closer to the number zero. (−2.5 or 0.7)

3 Arrange the following numbers in a descending order:

$0.75 \ , \ -\frac{1}{8} \ , \ \left|-\frac{1}{2}\right| \ , \ -\frac{1}{4} \ , \ |0.25|$

.... , ... , ... , ... , ...

4 Complete using (< , = or >):

a) -0.9 ☐ $|-0.9|$

b) $|-1.5|$ ☐ -1.5

c) $\left|3\frac{1}{4}\right|$ ☐ $\left|-4\frac{1}{3}\right|$

d) $-\frac{2}{5}$ ☐ $\left|-\frac{1}{2}\right|$

Accumulative Assessments on Units 1 – 2

Assessment 1

First: Choose the correct answer:

ⓐ If $6,688 = 19 \times 352$, then $6,694 \div 19 = 352$, and the remainder is ....
(14 or 41 or 6 or 16)

ⓑ The greatest common multiple of 9 and 8 is .... (9 or 8 or 1 or 72)

ⓒ The prime factors of 20 are ....
(2×10 or 5×4 or $2 \times 2 \times 5$ or 1×20)

ⓓ All negative numbers are .... zero. ($<$ or $=$ or $>$ or $\geq$)

ⓔ -25 ☐ -12 ($<$ or $=$ or $>$ or $\geq$)

Second: Complete the following:

ⓐ $6 \times (7 + 5) = (\ldots \times \ldots) + (\ldots \times \ldots)$

ⓑ .... comes just before -1.

ⓒ .... is the opposite number of "10".

ⓓ The integer that expresses (The value of the loss is 20 LE) is ....

ⓔ If $7 = |a|$, then $a =$ .... or ....

Third: Answer the following:

ⓐ If the total price of 25 books is 2,825 pounds, then what is the price of one book?

....

ⓑ Ahmed wants to plant 45 sunflower plants and 81 corn plants in his garden. If he put the same number of plants in each row, what is the greatest number of rows can he make?

....

....

....

.... = ...

.... = ...

GCF = ...

Assessment 2

First: Choose the correct answer:

ⓐ The rational number represented on the corresponding number line is ....

(number line: -8 -7 -6 -5 -4 -3)

$(4\frac{2}{2}$ or $5\frac{2}{3}$ or $-4\frac{2}{3}$ or $-5\frac{2}{3})$

ⓑ 12 and .... are relatively prime numbers. (16 or 15 or 35 or 20)

ⓒ The opposite of 6 $>$ .... $(-5$ or 5 or -7 or $7)$

ⓓ $\frac{3}{5}$ ☐ $-\frac{5}{3}$ $(>$ or $=$ or $<$ or $\geq)$

ⓔ -4 is to the right of .... on the number line. $(-5$ or 5 or -3 or $3)$

Second: Complete the following:

ⓐ The additive inverse of .... is itself.

ⓑ $-\frac{5}{4} =$ .... (In the decimal form)

ⓒ .... $\times$ (........ + ...) $= (2 \times 8) + (2 \times 6)$

ⓓ .... is a number whose prime factors are 3, 2, 7.

ⓔ $3\frac{1}{5} +$ .... $= 8\frac{1}{2}$

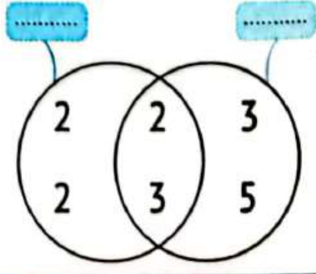
Third: Answer the following:

1 Find the results :

ⓐ $3\frac{5}{8} + 4\frac{1}{6} =$ ....

ⓑ $4\frac{1}{2} - 1\frac{3}{4} =$ ....

2 Complete the following using the opposite Venn diagram.



ⓐ The two numbers are .... and ....

ⓑ The GCF is ....

ⓒ The LCM is ....

Assessment 1 on Lessons 1&2

Unit 3

1 Complete following:

ⓐ The algebraic factor in the term "2.5 x" is ....

ⓑ The coefficient in the algebraic term $3 \times y$ is ....

ⓒ The number of terms in the algebraic expression $3 \times y - 25$ is ....

ⓓ Like terms in the algebraic expression $6x + 6y + 2x + 6$ are ....

ⓔ The constant in the algebraic expression $5b + 3.2$ is ....

2 Choose the correct answer:

ⓐ Like terms in the algebraic expression $2a + 3ab + 3$ are ....

(2 a , 3 a b or 3 a b , 3 or 2 a , 3 or none)

ⓑ The coefficients in the algebraic expression "$5a + 3b + 8 - 2.5$" are ....

(5 , 3 or 8 , 2.5 or 5 a , 3 b or 5 , 3 , 8 , 2.5)

ⓒ Ahmed and Tamer have 60 pounds, if what Ahmed has is x pounds, then what Tamer has is .... pounds. ($60 + x$ or $60 - x$ or $60x$ or $60 \div x$)

ⓓ The number of terms of the algebraic expression $2.5x + 2xy - 4$ is .... .

(3 or 4 or 5 or 6)

ⓔ Constants in the algebraic expression: $5a + \frac{2}{3} - 2b + 4$ are ....

(5 , 2 or $\frac{2}{3}$, 4 or 5 , $\frac{2}{3}$ or 2 , 4)

3 Complete using the mathematical expression "$5x + 2y + 6x + 3$":

ⓐ The number of terms of a mathematical expression is ....

ⓑ Like terms are ....

ⓒ Coefficients are ....

ⓓ Constants are ....

Assessment 2 on Lesson 3

Unit 3

1 Complete the following:

a) The verbal form for the algebraic expression $\frac{a}{5} + 3$ is

....

b) The verbal form for the algebraic expression 6 m is

....

c) The value that expresses the verbal form "three times b" is ....

d) Ahmed is now "y" years old. How old was he 3 years ago? ....

e) Ahmed shared a pizza pie equally with 4 of his friends, each of whom had their share of the pizza is (....................................).

2 Choose the correct answer:

a) The number "m" plus 18 and the result divided by 3 = ...

($3 \div (m + 18)$ or $(m + 18) \div 3$ or $\frac{m}{3} + 18$ or $m + \frac{18}{3}$)

b) If "b" is an integer, then the integer immediately next to it is ....

($b + 1$ or $b - 1$ or $2b$ or $\frac{b}{2}$)

c) A square of side length "s" cm has a perimeter of .... cm

($s + 4$ or $s - 4$ or $\frac{s}{4}$ or $4s$)

d) Two numbers whose sum is 35 and one of them is "w", then the other number is ....

($w + 35$ or $w - 35$ or $35 - w$ or $35w$)

e) The price of a kilogram of meat increased by 120 pounds. If its price becomes "x" after the increase, then its price before the increment is ....

($x + 120$ or $x - 120$ or $12 - x$ or $120x$)

3 Bassem runs one kilometer in 15 minutes.

Write a mathematical expression that expresses the number of kilometers that Bassem runs in "t" minutes.

....



Unit 1

Lesson 1: Using long division in the real world

Example 1:

78 volunteers volunteered in the food bank, and the total number of working hours was 9,689 in a year. If each volunteer worked the same number of hours equally. How many hours did each volunteer work in a year?

Sol:

```
        124
    ┌──────
 78 │ 9689
      78
      ───
      188
      156
      ───
      329
      312
      ───
       17
```

78 × 1 = 78
78 × 2 = 156
78 × 3 = 234
78 × 4 = 312
78 × 5 = 390
78 × 6 = 468

Number of working hours of each volunteer = 9,689 ÷ 78 = 124 hours

9689	÷ 78	= 124	R17
Dividend	divisor	quotient	remainder

Example 2:

During a charity campaign for the Food Bank, 6,982 food packages were collected and placed in 93 food cartons, where each carton contains the same number of food packages. If the Food Bank wants to put the largest number of food packages in each carton, then how many packages will each carton contain?

Sol:

```
        75
    ┌──────
 93 │ 6982
      651
      ───
      472
      465
      ───
        7
```

93 × 1 = 93
93 × 2 = 186
93 × 3 = 279
93 × 4 = 372
93 × 5 = 465
93 × 6 = 558
93 × 7 = 651
93 × 8 = 744

Number of packages will each carton contain = 6,982 ÷ 93 = 75 packages

6982	÷ 93	= 75	R7
Dividend	divisor	quotient	remainder



(1) 84 ÷ 3 = ………	(2) 156 ÷ 6 = ………	(3) 839 ÷ 9 = ………
…….. ⟌ ……..	…….. ⟌ ……..	…….. ⟌ ……..

(4) 360 ÷ 15 = ………	(5) 888 ÷ 32 = ………	(6) 615 ÷ 41 = ………
…….. ⟌ ……..	…….. ⟌ ……..	…….. ⟌ ……..



(7) 1475 ÷ 5 = ………	(8) 3776 ÷ 8 = ………	(9) 4935 ÷ 7 = ………
……… ………	……… ………	……… ………

(10) 858 ÷ 78 = ……	(11) 4935 ÷ 47 = ………	(12) 15632÷ 45 = ………
……… ………	……… ………	……… ………





Exercises: Using division in the world around us

➢ ***Choose the correct answer:***

1) If 384 ÷ 16 = 24, then the dividend is ……..

a. 384 **b.** 16 **c.** 24 **d.** 0

2) If 40 ÷ 5 = 8, then the remainder is ……..

a. 40 **b.** 5 **c.** 8 **d.** 0

3) If 29 ÷ 3 = 9 R2, then the divisor is ……..

a. 29 **b.** 3 **c.** 9 **d.** 2

4) If Mona has 17 oranges and she wants to distribute them equally among 3 of her friends, how many oranges are left?

a. 17 **b.** 3 **c.** 5 **d.** 2

5) Salma made 47 cookies which she will distribute equally in tiny glass jars. If each jar is to contain 6 cookies each, how many cookies will not be placed in a jar?

a. 47 **b.** 5 **c.** 6 **d.** 7

6) Noha baked cookies for her classmates. If she can placed 12 cookies on a tray. How many trays will she need to prepare 276 cookies?

a. 12 **b.** 21 **c.** 22 **d.** 23

7) Ahmed has 120 crayons distribute them among 6 of his friends, how many crayons are left?

a. 0 **b.** 1 **c.** 2 **d.** 3

8) Which is the correct relation represents the following statement: (distribute 16 crayons equally among 4 students)

a. 16 × 4 **b.** 16 ÷ 4 **c.** 16 + 4 **d.** 16 – 4



Exercises: Using division in the world around us

➢ ***Which situations involve division? Identify all that apply:***

1) The 78 volunteers at the food bank donated a total of 9,672 hours for the year. Each volunteer worked the same number of hours. How man, hours did each volunteer donate to the food bank?

……………………………………………………………………………………………

……………………………………………………………………………………………

……………………………………………………………………………………………

……………………………………………………………………………………………

……………………………………………………………………………………………

2) The food bank can make one food box that can feed one person, 3 meals per day for two weeks. How many total meals can one food box make?

……………………………………………………………………………………………

……………………………………………………………………………………………

……………………………………………………………………………………………

……………………………………………………………………………………………

……………………………………………………………………………………………

3) The food bank's top donor donated 1,250 tokens at each of 10 different fundraisers. What is the total donation for all fundraisers?

……………………………………………………………………………………………

……………………………………………………………………………………………

……………………………………………………………………………………………

……………………………………………………………………………………………

……………………………………………………………………………………………

4) With the 6,975 cans of food collected during the food bank's largest food drive, 93 meal boxes were created with the same number of cans in each box. In order for the food bank to use the most cans, how many cans would be in each box?

……………………………………………………………………………………………

……………………………………………………………………………………………

……………………………………………………………………………………………

……………………………………………………………………………………………

………………………………………………………………………



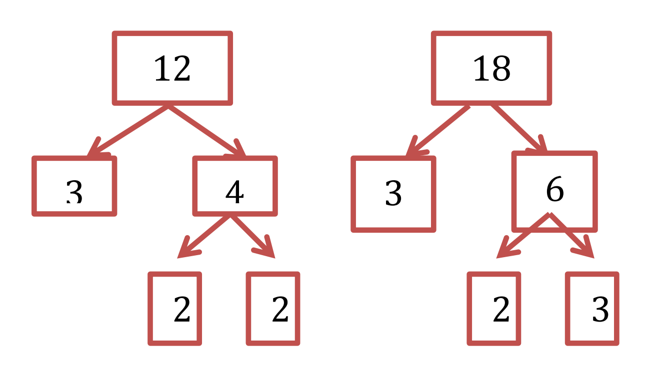
Lesson 2

Factorize the number into its prime factor

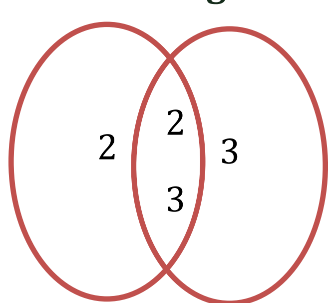
➢ Use Venn diagram to find (G.C.F) and (L.C.M):

EX: Find (G.C.F) and (L.C.M) of the numbers 12, 18 by using Venn diagram

Sol:



Venn diagram



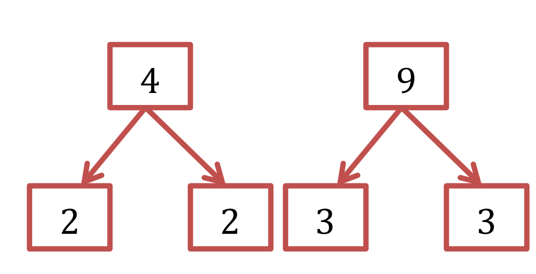
$12 = 2 \times 2 \times 3$

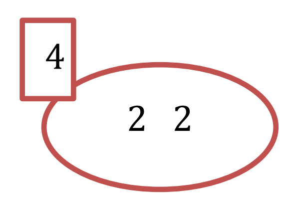
$18 = 2 \times 3 \times 3$

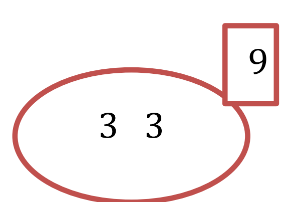
•From Venn diagram:

G.C.F = $2 \times 3 = 6$ (Multiply the common factors inside Venn diagram)

EX: Find (G.C.F) and (L.C.M) of the numbers 4, 9 by using Venn diagram







$4 = 2 \times 2$

$9 = 3 \times 3$

✓ ***From Venn diagram:***

G.C.F = 1

L.C.M = 2 × 2 × 3 × 3 = 36 (Multiply all the numbers inside Venn diagram)

Notes:

- The common factor of all numbers is 1
- The greatest common factor (G.C.F) of any two prime numbers is 1
- The G.C.F of the two numbers which haven't any common prime factors is 1
- The common multiple of all numbers is 0
- The (L.C.M) of any two prime numbers is their product.



- ***Factorize each of the following to its prime factors***

a) 4	b) 6	c) 10
d) 8	e) 12	f) 20
g) 16	h) 24	i) 36





➢ ***Factorize each of the following to its prime factors:***

a) 8 and 10
b) 12 and 16
c) 4 and 9
d) 14 and 16

➢ ***Complete each of the following***

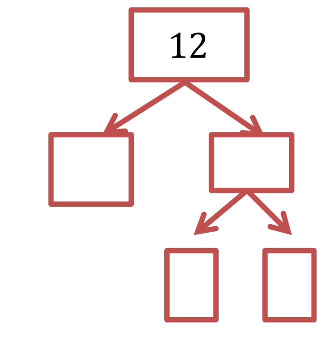
1. The smallest prime number is …………………
2. The smallest odd – prime number is ………..
3. The number that its prime factors are 2, 3, 5 is ………..
4. The prime factors of 15 are …………
5. The GCF of 2 and 4 is …………
6. The LCM of 10 and 5 is ………..

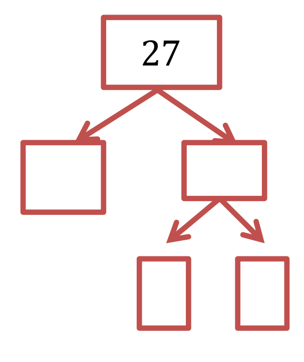


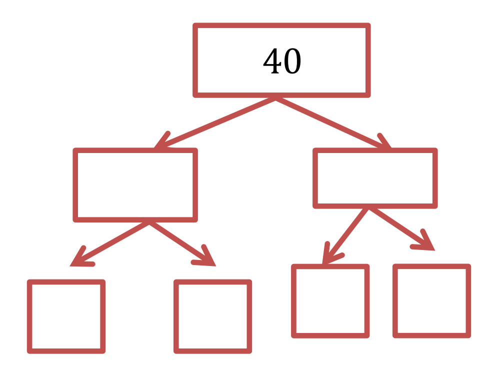
- ***Complete each of the following***

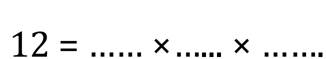
1. The prime number between 32 and 40 is …………..
2. All prime number are odd except …………
3. The number that its prime factors are 5, 7 is …………..
4. The prime factors of 35 are ………….
5. The GCF of 12 and 16 is ………….

- ***Factorize each of the following to its prime factors***









27 = …… ×…… × …….

40 = …… ×…… × ……. × …….

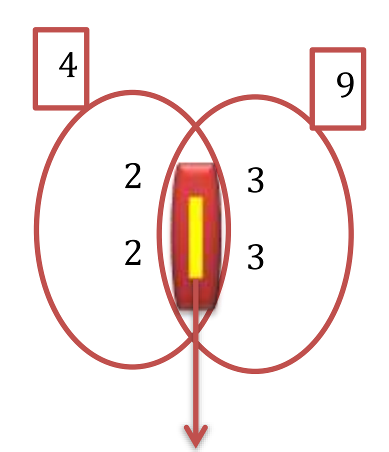
- ***Find using venn diagram the GCF and LCM of***

1) 25 and 45
2) 16 and 14



Learn ➡ Relatively Prime number

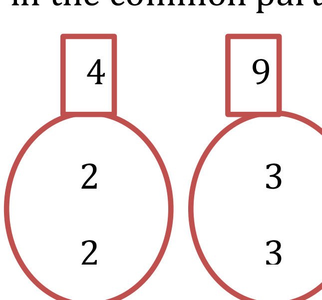
They are numbers whose only common factor is 1
So they are prime numbers with respect to each other
Ex. 4 and 9 are composite numbers. 4 = 2 x 2 9 = 3 x 3 ▪ The greatest common factor of 4 and 9 is 1 ▪ Therefore 4 is a prime number with respect to 9. ▪ 9 is a prime number with respect to 4.



When there is no prime factors in the common part, then GCF = 1

No common prime factors

So, we draw two distant circles

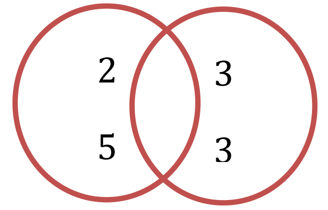


Note:

The lowest common multiple of the relatively prime numbers is their product.

Ex, the common multiple of 4 and 9 is 4 x 9 = 36

➢ ***Using the following venn diagram,***



1. The two numbers represented in the venn diagram are …….. and ……………..
2. The common prime factors of the two numbers are ………………………..
3. The GCF for the two numbers is …………………………..
4. The LCM for the two numbers is …………………………..
5. Are the two numbers relatively prime number? …………………………..

(Yes Or No ?)

Lesson 3

Writing numerical expression by using G.C.F

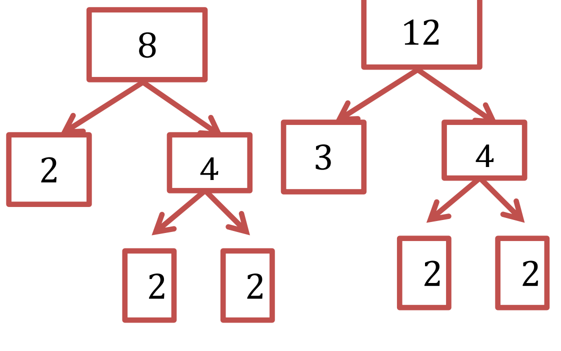
Writing numerical expression by using (G.C.F):

EX:

Sarah wanted to make a number of cartons to donate to charitable organizations; if she had 8 boxes of cheese and 12 bags of legumes, what is the largest number of cartons that can be made so that all cartons include the same number of items?

1. Prime factorization

2. Venn diagram



Number of first in each carton

Number of second in each carton

2 | 2, 3 | 3

Their products = the number of all cartons

8 = 2 × 2 x 2

12 = 2 × 2 x 3

4 x (2 + 3)

So, Numerical expression: (4 × 2) + (4 × 3) the total number of items: 8 + 12 = 20

Means that: We have 4 cartons each carton has 2 boxes of cheese and 3 bags of legumes

EX:

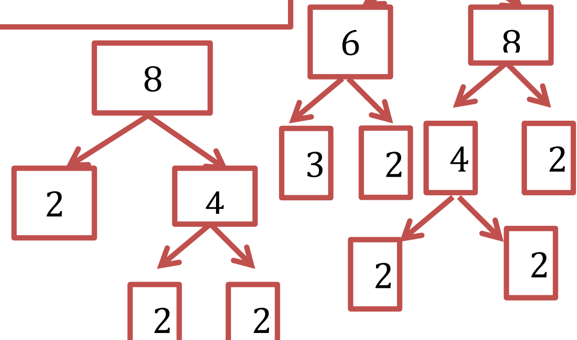
The students collected 36 boxes of cheese and 48 bags of legumes. What is the largest number of baskets of food that can be prepared without any food left?

36 = 2 × 2 × 3 × 3

48 = 2 × 2 × 3 × 2 × 2

= 12 × (3 + 4)

= (12 × 3) + (12 + 4)





- ***The Distributive Property states that multiplying a number by the sum of two addends is the same as multiplying that number by each addend individually and then adding those products.***

EX. 7 x (3 + 9) = (7 x 3) + (7 x 9)

- ***Complete the following:***

A. 5 x (3+6) = (………….. X ………) + (…………. X ………)
B. ………………. x (…………. X ………) = (7 x 2) +(7 x 4)
C. 8 x (…………. X ………) = (………. x 9) + (………...x 2)
D. …………. X (4 + 6) = (9 x ……….) + (9 x ……………..)
E. The GCF for 9 and 6 is ………………….
F. The GCF of all numbers is …………

✓ ***Answer the following:***

A. Samo has 12 red crayons and 5 blue crayons, What is the greatest number of groups can Samo divide the crayons into so that all groups contain the same number of both colors?

………
………
………

B. Marwa divided 12 oranges and B candies into bags so that the bogs contained the same number of oranges and the some number of candies writes a numerical expression for this situation.

………
………
………



Choose the correct answer :-

1. A Student is given 20 packs of cheese and 40 grain bogs to make food boxes. He uses the expression 10 2+4 to represent how many boxes he could make with equal amounts of food in each box His friend tells him that there is a way to make more boxes. Which one of these expressions would represent his friend's solution?

   A. 20(2+4) B. 10(1+21) C. 10(1+4) D. 20(1+2)

2. 30+ 50 = ……………………..

   A. 10 (3+ 5) B. 5(6+5) C. 10(30+50] D. 2(15+5]

3. Petra is making packs for a group of her friends going a trip. Each pack should have the same number of sandwiches and same number of juice if she has 24 sandwiches and 30 juices what is the expression greats number of packs that she can make with no any left over?

   A. 2 (12+ 15) B. 3(8 +10) C. 4(6 + 5] D. 6(4 + 5]

4. 7(2 + 1) = ……………………..

   A. 14 + 7 B. 14 + 1 c. 14 + 71 D. 72 + 71

5. 5(2 + …………………) = 10 +35

   A. 5 B. 7 c. 2 D. 8

6. 9(1 + 2) = 9 + ……………………

   A. 9 B. 81 c. 18 D. 27



Lesson 4

Factorize the least multiple

Adding and subtracting fractions with like denominators:

Ahmed has 3 equal bags of oranges. He wanted to taste the fruit inside each bag to make sure of its quality, the following table represents that:

			The sum
The whole	$\frac{6}{6}$	$\frac{6}{6}$	$\frac{6}{6} + \frac{6}{6} = \frac{12}{6} = 2$
What Ahmed ate	$\frac{3}{6}$	$\frac{4}{6}$	$\frac{3}{6} + \frac{4}{6} = \frac{7}{6} = 1\,\frac{1}{6}$
Remainder	$\frac{6}{6} - \frac{3}{6} = \frac{3}{6}$	$\frac{6}{6} - \frac{4}{6} = \frac{2}{6}$	$\frac{3}{6} + \frac{2}{6} = \frac{5}{6}$

Generally: when we add or subtract any two fractions with like denominators, we add or subtract the numerators with the same denominators.

EX: $\frac{1}{5} + \frac{2}{5} = \frac{3}{5}$ EX: $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\,\frac{1}{5}$

EX: $\frac{5}{7} - \frac{3}{7} = \frac{2}{7}$ EX: $2\frac{1}{6} - \frac{3}{6} = 1\,\frac{4}{6}$

Adding and subtracting fractions with unlike denominators:

Ahmed wanted to make a meal of oranges and pears by use half bag of oranges and $\frac{1}{4}$ of bag of pears, the following table represents that:

			The L.C.M of denominators	The sum
The whole	$\frac{6}{6}$	$\frac{4}{4}$	$6 = 2 \times 3$ $4 = 2 \times 2$	$\frac{12}{12} + \frac{12}{12} = 2$
What Ahmed ate	$\frac{3}{6}$	$\frac{1}{4}$		$\frac{6}{12} + \frac{3}{12} = \frac{9}{12}$
remainder	$\frac{6}{6} - \frac{3}{6} = \frac{3}{6}$	$\frac{4}{4} - \frac{1}{4} = \frac{3}{4}$	L.C.M $= 2 \times 3 \times 2 = 12$	$\frac{6}{12} + \frac{9}{12} = \frac{15}{12} = 1\,\frac{3}{12}$



A. Find the result:

1- Add :-

$\frac{3}{5} + \frac{1}{5}$ = ………………	$\frac{2}{7} + \frac{6}{7}$ = ………………	$5\frac{1}{4} + \frac{2}{4}$ = ……………
$\frac{1}{4} + \frac{2}{4}$ = ………………	$\frac{1}{6} + \frac{5}{6}$ = ………………	$2\frac{3}{8} + 1\frac{7}{8}$ = …………
$\frac{3}{11} + \frac{7}{11}$ = ……………	$\frac{2}{3} + \frac{2}{3}$ = ………………	$1 + \frac{2}{9}$ = ………………
$\frac{1}{3} + \frac{1}{4}$ = ………………	$\frac{1}{5} + \frac{1}{3}$ = ………………	$2\frac{1}{2} + \frac{2}{4}$ = ……………
$\frac{1}{4} + \frac{2}{12}$ =	$\frac{1}{5} + \frac{5}{5}$ = ………………	$2\frac{3}{4} + 3\frac{7}{3}$ = …………
$\frac{3}{3} + \frac{7}{3}$ = ……………	$\frac{7}{10} + \frac{5}{6}$ =	$1 + \frac{2}{7}$ = ………………

2- Subtract:-

$\frac{7}{8} - \frac{3}{8}$ = ………………	$3\frac{3}{5} - 1\frac{1}{5}$ = ……………	$3 - \frac{1}{5}$ = ………………
$\frac{3}{5} - \frac{1}{5}$ = ………………	$5\frac{3}{7} - \frac{6}{7}$ = ………………	$5 - 1\frac{2}{7}$ = ………………
$\frac{7}{13} - \frac{4}{13}$ = ………………	$4\frac{2}{5} - 1\frac{4}{5}$ = …………	$1 - \frac{3}{8}$ = ………………
$\frac{5}{6} - \frac{3}{8}$ = ………………	$\frac{1}{4} - \frac{1}{5}$ = ………………	$1\frac{1}{12} - \frac{5}{9}$ = …………
$\frac{5}{6} - \frac{7}{12}$ = ………………	$\frac{5}{6} - \frac{1}{2}$ = ………………	$6\frac{4}{5} - 2\frac{1}{4}$ = …………
$\frac{3}{4} - \frac{2}{3}$ = ……………	$\frac{5}{7} - \frac{2}{3}$ = ………………	$3\frac{2}{3} - 1\frac{2}{5}$ = …………





3- find the result in the simplest form

$\frac{1}{5} + \frac{1}{8} =$ ……………	$\frac{3}{7} + \frac{2}{5} =$ ……………	$2\frac{1}{3} + 1\frac{1}{2} =$ …………
$\frac{1}{4} + \frac{1}{12} =$ ……………	$\frac{1}{4} + \frac{2}{3} =$ ……………	$1\frac{3}{5} + \frac{1}{3} =$ …………
$\frac{7}{10} + \frac{5}{6} =$ ……………	$\frac{3}{4} + \frac{4}{5} =$ ……………	$3\frac{2}{8} + 2\frac{1}{6} =$ …………
$4\frac{2}{3} - 2\frac{1}{4} =$ …………	$1\frac{1}{12} - \frac{5}{9} =$ …………	$10\frac{1}{2} - 5\frac{1}{3} =$ ……..
$9\frac{3}{7} - 4\frac{1}{6} =$ …………	$8\frac{11}{12} - 7\frac{3}{4} =$ …………	$10\frac{1}{4} - 3\frac{1}{12} =$ ……..
$5\frac{5}{8} - 1\frac{1}{3} =$ …………	$9\frac{1}{6} - 4\frac{4}{9} =$ …………	$4\frac{1}{2} - \frac{1}{4} =$ …………

A. ***Choose the correct answer*** :-

4) $\frac{5}{6} - \frac{3}{5} =$ …………..

a) $\frac{7}{30}$ b) $\frac{8}{30}$ d) $\frac{9}{30}$ c) $\frac{1}{3}$

5) The equivalent fraction of $\frac{12}{15}$ is …………..

a. $\frac{2}{5}$ B. $\frac{3}{4}$ c) $\frac{4}{5}$ d) $\frac{1}{3}$

6) $2\frac{3}{4} + 1\frac{2}{3} =$ ………

a) $3\frac{5}{12}$ b) $4\frac{5}{12}$ c) $\frac{17}{12}$ d) 4



4. *Answer the following:*

1) Salma bought $3\frac{1}{2}$ kg of tomato, and $1\frac{1}{4}$ kg of onion. How much vegetable did she buy?

………
………
………

2) Basma walked $2\frac{3}{4}$ km on Sunday, and $1\frac{1}{3}$ km on Monday. What distance did she walk in all?

………
………
………

3) Ali bought a bottle of juice contains $1\frac{3}{4}$ liters of orange juice. He drank $\frac{2}{5}$ liter of juice. How much of juice is left in the bottle?

………
………
………



Revision

1. *Answer the following:*

Find G.C.F and L.C.M of 12 and 18 by two methods.

……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………

A factory produces 875 pieces of cloth weekly. How many pieces did the factory produce daily?

……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………

2. *Complete the following.*

a) 6(7 + 9) = 42 + ………………………

b) 5 x 3 + 5 x 7 = 5 (…………….. + ………….)

c) 26,900 ÷ 43 = ………………………

d) The common multiple of all numbers is ……………………………

3. *Choose the correct answer.*

(1) 20 + 25 = ……….

a. 2(0 + 5) b. 5(5 + 2) c. 5(4 + 5) d. 20(0 + 5)

(2) 13,510 ÷ 23 = 587R ………….

a. 9 b. 8 c. 7 d. 6

(3) Youssef saves 105 LE. Weekly. How much did he save daily?

a. 15 b. 98 c. 735 d. 112

(4) From the opposite venn diagram, the expression is ……………….

a. 10(6 + 35) b. 3(10 + 7)

c. 7(10 + 3) d. 10(3 + 7)

3 | 2, 5 | 7



4. Complete the following.

A. The L.C.M of 5 and 7 is ………………

B. 8,529 ÷ 25 = 341 R ……………………

C. The common factor of all numbers is ……………..

D. In the opposite venn diagram the G.C.F is ……………

E. The divisor in the equation 16,692 ÷ 52 = 321 is ……………

5. Choose the correct answer

(1) …………….. is a multiple of any number

a. 3 b. 2 c. 1 d. 0

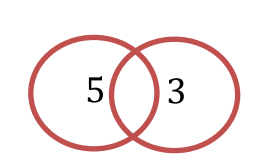
(2) In the equation 2,150 ÷ 25 = 86, the remainder is …………..

a. 0 b. 25 c. 86 d. 2,150

(3) Which of the following are relatively prime numbers? ………..

a. 4 and 8 b. 12 and 18 c. 2 and 12 d. 9 and 4

(4) In the opposite venn diagram the L.C.M is ……………



a. 0 b. 1 c. 15 d. 8

(5) 2,574 ÷ 7 = …………………………

a. 376 R 5 b. 367 R 5 c. 367 d. 376

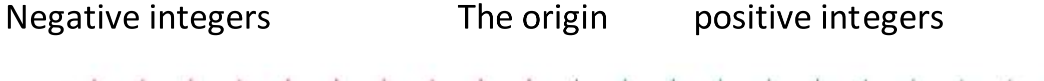


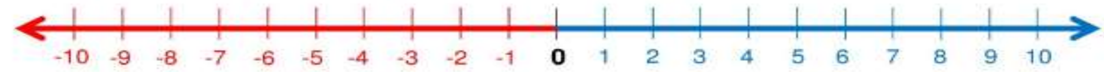
Unit 2 : Rational Numbers

Lesson 1: Counting numbers , natural number & Integer numbers

- Counting numbers: 1, 2, 3, 4, …
- Natural numbers: 0,1,2,3,4,…………………
- Integer numbers : ……….,-4,-3,-2,-1,0,1,2,3,4,…………………

Negative integer and zero and positive integers
Or negative integers and zero and counting numbers
Or negative integers and natural numbers

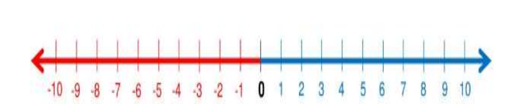


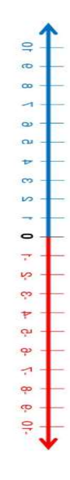


-The negative integers are to the left of zero .
- the point that represents 0 is called (the origin)
- the positive integers are to the right of zero .

- Representing integers on number line :

1-horizantal number line : 2-vertical number line :







Notes :

- Integer numbers are infinite
- The smallest positive integer is 1.
- The greatest negative integer is -1.
- The number zero neither negative nor positive number.
- Zero is smaller than any positive integer number.
- Zero is greater than any negative integer number.

1) chooce the correct answer :

a. which is an integer ?

[-0.2 or $\frac{1}{2}$ or -10 or $3\frac{1}{2}$]

b. the smallest counting number is ………………..

[0 or 1 or -1 or -10]

2) write an integer to represent each the following situation .

a. A temperature of 3 degrees below zero . [………]

b. A bank deposit of 100 L.E. [………]

c. A loss of 5 L.E. [………]

3) Represent each of the following numbers on the horizontal number line .

a. 4, -2 , 0 , 3 , -5

……………………………………………………………………………………………………

b. -2 , -1 , 0 , 1 , 2

4) Represent each of the following numbers on the vertical number line .

a. 10 , -2 , -3 , 5 , 3

b . -4 , -3 , -2 , -1 , 0 , 1



Life situations of integers:

Ex : write an integer to represent each situation :

1) The orange juice freezes at 6 c° below zero

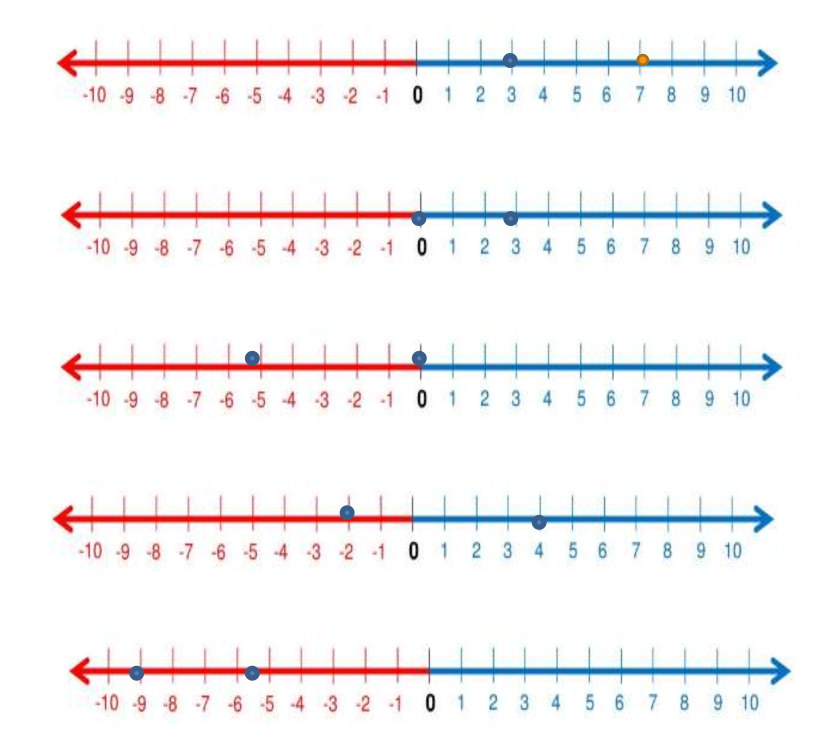
2) Ahmed walked 5 steps forward

3) A building is 12 m high

4) Amir diving 7m below sea level

Find the distance between two integer numbers on the number line :

Ex : Find the distance between each two integer numbers on the number line :



Note :

. the distance between any two numbers is always positive .

. we can write positive numbers by two ways :

Ex : 2 or +2



1) Which of the following is an integers ?

a. -31 b.7.3 c. $-\frac{3}{7}$ d.0

2) complete :

a) the smallest natural number is ……………. And the smallest counting number is ………………

b) the integers between -3 and 2 are ………………..

c) the number ………. is neither positive nor negative .

d) the integer which just next -4 is ………………

e) the integer which just before -10 is ………………

f) the number of integers between -4 and 3 is …………

g) the smallest non negative integer is ……….and greatest non- positive integers is ………….

h) the smallest positive integer number is …………… and the greatest negative integer number is ………………..

3) write an integer to represent each situation :

a) A temperature is 12°C below zero . (……….)

b) she is diving 10m below sea level . (……….)

c) Ahmed withdraws 6000pounds from his bank account . (……….)

d) the tree is 4m high. (……….)

e) 3 steps forward . (……….)

f) Abank deposit of 750 L.E. (…………)

g) A loss of 20L.E. (……….)

h) A gain of 7 kilograms. (……….)

i) A profit of 100 L.E. (……….)

j) A decrease of 200 L.E. (……….)

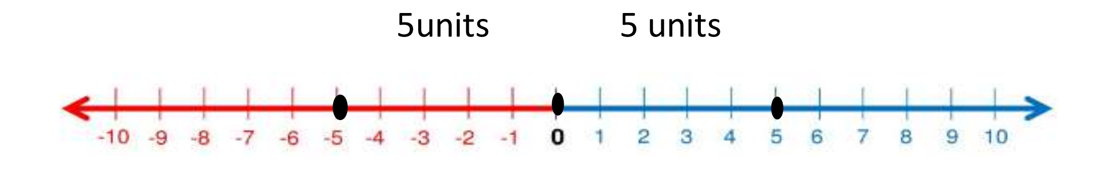


Lesson 2: the opposite number (additive inverse)

On the number line any two numbers that are at the same distance from zero and on two opposite position of it are called opposites or additive inverse

For example:

5units 5 units



opposites or additive inverses

Each of the integers 5 and -5 has the same distance away from 0 therefore 5 and -5 are opposites .

Note that :

a. The opposite of 5 is -5

. The opposite of -5 is 5

. The opposite of the opposite of 5 is – [-5] which is 5

b. The opposits of 0 is 0

4-Write the opposite of each integers :

a) -5 …………… b) 6 …………… c) 0 ………………

d) -16……………… e) 1000 ………… F) -(-4) ……………

5-write each statement ,filling in each blank with inequality symbol,<or>;

a) -7…………..-3 b) 8…………..0

c) 3 …………4 d) 2 ………… -9

e) -6…………0 f) 2 …………..-2



6) Which are true ? select all the true statements.

a) A number and its additive inverse are the same distance away from zero on a number line but on opposite sides .

b) zero is its own additive inverse .

c) To show 5 and its additive inverse on anumber line count 5 units and plot the point 5 units to the right of 0 . then , plot the point 5 units to the left of 0.

d) The additive inverse of any number is zero .

7) Arrange the following integers from least to greatest :

a) -6 , 0 , -4 , 4 ,-7 , 3

……………………………………………………………………………………….

b) 7 , -7 , -3 , -5 , 11 , -11 .

…………………………………………………………………………………………

8) Arrange the following integers in an ascending order :

4 , -5 , 1 , -3 , 0 , 6 , -7 and -1

9) the distance between the number 2 and its opposite on the number line equals ……….. units .

10) the distance between the opposite of 4 and 0 on the number line equals ……… units .

Lesson 3 : Analyyzing Rational number by using models :

What is rational number ?

A rational number is any number that can be written in form $\frac{a}{b}$, where a and b are integers and b $\neq 0$

Example : All 5 ,-3 , 0 , $3\frac{1}{8}$, 0.28 , can be written in the form $\frac{a}{b}$ as :

$\frac{5}{1}$, $\frac{-3}{1}$, $\frac{0}{1}$, $\frac{25}{8}$, $\frac{28}{100}$



Write the following numbers in the opposite venn diagram

$\frac{3}{4}$, 782 , 0 , -10 , -0.5 , 15 , -6 , $7\frac{12}{13}$

Write the given rational number in fraction form $\frac{a}{b}$:

a. -3 b.-0.31 c. $3\frac{3}{9}$ d.2.5

> Note
>
> .Any collection of numbers is called a set as "set as rational numbers "
>
> .Each rational number is called an element of the set of rational numbers.

Match the numbers to the best subset:

Rational numbers	integer	counting number	natural number

a.0.785 .... b .$\frac{2}{8}$ .... c.-439..............

d.-2 .... e. 0............... F.4.6 ....

g.5.............. h. 17266........... i.-35 ....

Rational numbers

Integers

not integers fraction and decimals

negative integers

natural numbers

zero and counting

Belonging of an element to aset ;

We can say that -3 belongs to set of integers but -3 does not belong to set of natural number .



Example :

$\frac{1}{2}$ belongs to set of rational numbers

0 does not belong to set of counting numbers .

Example :

Write 'belong' or 'does not belong '.

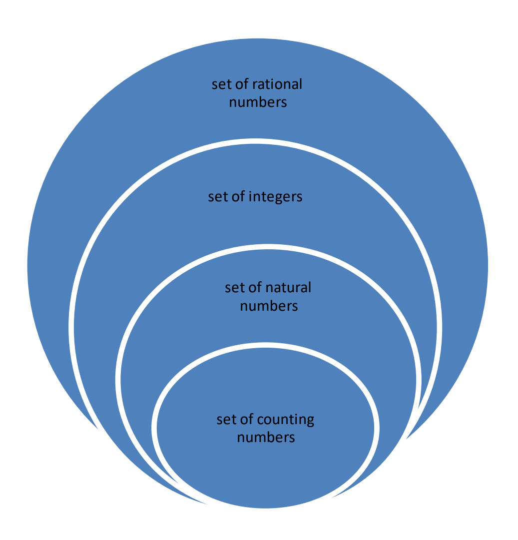
a .$-\frac{3}{7}$ ……………..to set of integers.

b.0……………to set of natural numbers.

c.-4 …………….. to set of counting numbers.

d. 0 ………………..to set of rational numbers .

Inclusion and subsets :



Write 'a subset ' or 'not subset '

a. set of integers is …………of set of counting numbers.

b. set of natural numbers is ………..of set of integers .

c.set of counting numbers is ………..of set of rational numbers .

d. set of rational numbers is ……………..of set of natural numbers .

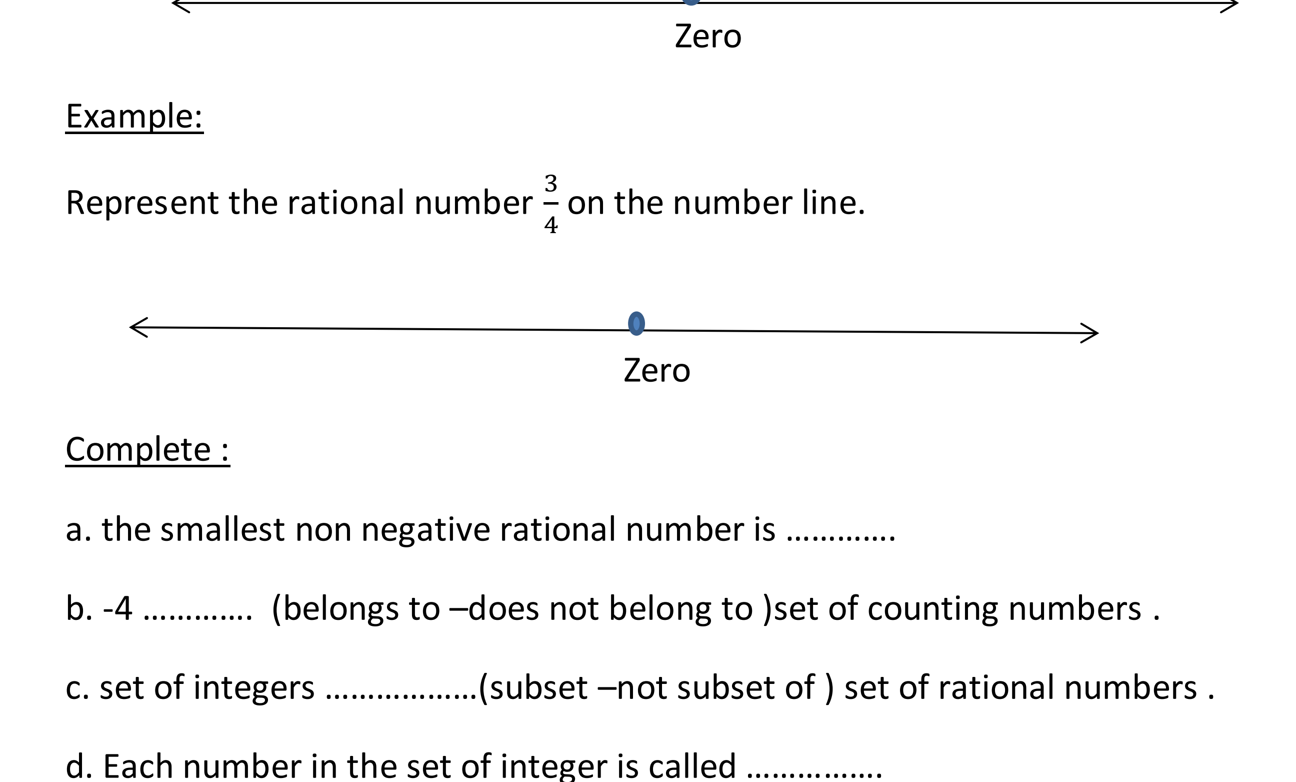


Representung the rational number on the number line :

.Each rational number can be represented by a unique point on the number line .

. the positive rational numbers are represented on the number line by points lying on the right side of the point which represents the number zero and and the negative rational numbers are represented by points lying on the left side of the point which represents the number zero and the number zero neither positive nor negative.

Negative rational numbers (-) positive rational numbers (+)



Example:

Represent the rational number $\frac{3}{4}$ on the number line.

Zero

Complete :

a. the smallest non negative rational number is …………

b. -4 ………… (belongs to –does not belong to)set of counting numbers .

c. set of integers ………………(subset –not subset of) set of rational numbers .

d. Each number in the set of integer is called ……………



lesson 4: comparing and ordering rational numbers.

If the point which represent the number x lies on the left of the point which represent the number y on the number line as shown in the opposite

figure ,then: x<y or   y>x



x   y

Example :- Represent the following rational numbers on the number line , then arrange them ascendingly : $\frac{7}{5}$, zero , $\frac{9}{5}$, 2, -1

-Represent the following rational numbers on the number line , then arrange them ascendingly : 2, zero , $\frac{5}{2}$, -1, $\frac{7}{2}$

Compare the two numbers in each of the following using suitable sign (< . > ,=).

a. $\frac{5}{12}$, $\frac{7}{12}$ b. $\frac{6}{12}$, $\frac{2}{3}$ c. $\frac{11}{12}$, $\frac{11}{15}$

d. $\frac{2}{3}$, $\frac{4}{5}$ e. -4 , -4.1 f.3.7 , 3.15

g. $\frac{11}{2}$, 3.2 h. $\frac{1}{4}$, - $\frac{5}{6}$

Compare each the following using suitable sign (< . > ,=).

a.$\frac{3}{6}$ ………… $\frac{2}{3}$ b. - $\frac{7}{5}$ ……….$\frac{4}{5}$ c. $\frac{1}{5}$ …….. $\frac{1}{6}$

d. $\frac{4}{10}$ ……….$\frac{14}{35}$ e. $\frac{10}{15}$ ……. $\frac{2}{3}$ f. - $\frac{3}{4}$ …….. - $\frac{2}{4}$

Write the correct sign (< ,> , =).

a. - $\frac{1}{2}$ …….. zero b.0.8 …….. 1 c. – 1.6 ……….. - $\frac{8}{5}$

d. 3.7 …… 3.65 e. $\frac{3}{2}$ …….. $\frac{1}{2}$ f. $\frac{1}{4}$ ……….. $\frac{1}{6}$

g.-4 $\frac{1}{2}$ ……… -5 h.- $\frac{5}{7}$ …….- $\frac{3}{2}$ i. 0.5……… $\frac{2}{8}$

j .3$\frac{1}{2}$……… 3.5 k.- $\frac{3}{4}$ ……… $\frac{1}{4}$ l. 1 $\frac{2}{3}$ ………. 1 $\frac{4}{5}$



Order rational numbers order the given set numbers from least to greatest, using a table like the one shown.

2.1	1.4	$-3\frac{1}{4}$	$-1\frac{7}{8}$	$-2\frac{1}{2}$

Least			greatest
....	....	....	....

.order the given set of numbers from greatest to least ,using table like the one shown .

3.4	$-2\frac{1}{2}$	0	$-1\frac{3}{7}$	$3\frac{1}{4}$

greatest			Least
....	....	....	....



Choose the correct answer.

1) $\frac{3}{5}$ ………… $\frac{2}{7}$

a.> b.< c.=

2) 0.7 ……….0.65

a.> b.< c.=

3) -$\frac{1}{4}$ ……….-$\frac{2}{9}$

a.> b.< c.=

4) $\frac{2}{8}$ ……….0.5

a.> b.< c.=

5) ……….is lying between 3.14 and 3.2 .

a.3.15 b.3.21 c.3.22 d.3.20

6) 2.8 > …………

a.3.1 b.4 c.-5.8 d.7.9

7) the smallest number from the following is ……….

a.0.11 b.0.3 c.0.101 d.$\frac{1}{2}$

8) the greatest number from the following is ……….

a.$\frac{1}{2}$ b. $\frac{1}{3}$ c. $\frac{1}{4}$ d. $\frac{1}{12}$



Lesson 5&6 :- Exploring Absolute value

- Comparing Absolute values

- what is the absolute value ?

The absolute value of a rational number is its distance from zero since distance is positive , or zero .

$|5|$= 5 and $|-5|$ =5

Note - $|-5|$ = -5

Find the value of each of the following :

a. $|-4|$ b. -$|4|$

c. $|0|$ d. - $\left|-\frac{3}{7}\right|$

e. $|-3|$ + $|5|$ f. $|-6|$ -$|6|$

compare using (<, >, =)

a.$|-7|$ ……….. $|-11|$

b. -5 ………. $|-2|$

c. $|-2.4|$ ………..$|-2.40\ |$

d. $\left|-3\,\frac{1}{7}\right|$ …………$\left|-3\,\frac{1}{5}\right|$

e. $|-2|$ ………… $|-7|$

f. $|-2.8\ |$ ……….. $-\,2.8$



Find the value of each of the following :

a. $|-7|$ ……….

b. $|-3| + |5|$ ……….

c. $|-5| + 7$ …………

d. $|-5| - 5$ ……….

e. $|-30| \div |-5|$ ……….

f. $|-2| + |-13|$ ……….

g. $|-12|$ - $|12|$ ………..

h . $|-3| \times |-5|$ ……….

I. $|0| \times |-3|$ …………

J . $|-100|$ - $|-50|$ ……..

k. $8 \times |-11|$ ……….

L . $|-10|$ - $|2|$ ……….

Compare using [< , > or =] .

a. $|-3|$ ……. $|-1|$

b. $|-4|$ ……… $|-3|$

c. -1.4 ……… $|-1.4|$

d. $\left|9\frac{3}{5}\right|$ ………$\left|-9\frac{3}{5}\right|$

e. $5\frac{5}{6}$ ………. $\left|-\frac{35}{6}\right|$

f . $|-2.71|$ ……… 2.7



Find the value of x :

a. $|x|$ =5

b. $|-4|$ =x

c . $|x|$ = 12

d $|3|$ = x

e. $|x|$ = 0

f . $|-101|$ =x

g. $|-12|$ =x

h . $|x|$ = 20

choose the term that correctly completes the sentences :

$\lvert 2 \rvert = \lvert -2 \rvert$		
absolute value	distance	direction
equal	negative	positive

a. The ……… symbol in the expression $|2|$, signifies the distance from 0 to 2 .

b. The ……… symbol in the expression $|-2|$, signifies the distance from 0 to- 2 .

c. The ………. Sign shows the relationship between each side and that their values are the same …………..from 0 .



choose the correct answer

1) $|-7| >$ ……………

a. $|-6|$ b. $|-7|$

c. $|-8|$ d. $|-9|$

2) $|-1.34| <$ …………………

a. 1.4 b. -1.29

c. -1.4 d. 1.19

3) $\left|-3\frac{1}{4}\right|$ …………. 3.12

a. > b. <

c. =

4) the absolute values of opposites are ……….

a. equal b. different

c. negative

5) A negative number with an absolute value greater than 10

a. 10 b. 11

c. -9 d. -12

6) The distance between 10 and $|-10\ |$ on the number line is ……….. unit[s]

a. 10 b.-10

c. 0 d. 20

7) The absolute value of the opposite of -2$\frac{1}{5}$ is …………….

a. 4$\frac{2}{5}$ b. 0

c. -2$\frac{1}{5}$ d. 2$\frac{1}{5}$



8) $|2| \times |-2|$ = …………….

a. 0 b. 4

c. -4 d. -1

9) $|x|$ …….. -1

a.> b. <

c. =

10) $\left|-2\frac{1}{4}\right| \div \left|\frac{1}{2}\right|$ =

a. $4\frac{1}{4}$ b. $4\frac{1}{2}$

c. $\frac{9}{8}$ d.4

Write the opposite (additive inverse) number of each of the following:

a. $\frac{3}{7}$ ………… b. $-\frac{2}{5}$ …………. c.0 …………

d. $\frac{1}{2}$ ………… e. $-\frac{3}{2}$ …………. f .$2\frac{1}{3}$ ………….

Represent each of the following rational number on the number line :

a. $\frac{1}{3}$ b.$-\frac{1}{2}$ c. $3\frac{1}{4}$ d.-2.5

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Revision on unit 2

Choose the correct answer :

1) the rational number between -3.1 and -3.17 is ……………

a.-3.2 b. 3.15 c. -3.14 d. -3.18

2) which of the following is greatest number ?

a. -10 b. |-10 | c. -11 d. 9

3) the additive inverse of |-2| is ………….

a. 2 b. -2 c. $-\frac{9}{3}$ d. $-\frac{12}{4}$

4) |-3| + |-2| =…………

a .5 b.-5 c. 6 d.0

5) All integers are also ………..numbers .

a. counting b. natural c. rational

6) -3 …………………set of natural numbers .

a. belongs b. does not belong c. is a subset of d. is not a subset

7) the set of counting number numbers …………….te set of rational numbers

a.belongs b. does not belong c. is a subset of d.is not subset of

8) |-8| > ………..

a.|-9| b. |-7| c.9 d. 8

9) the best subset for of the number -2 is ………….

a. acounting number . b. an integer

c. a natural number . d. a rational number

10) the smallest natural number is ………….

a. -1000 b. -1 c. 0 d. 1



11) the integer which comes just before -3 is ……….

a.-2 b. -4 c. -1 d. 0

12) The opposite number of - $\frac{3}{8}$ is …………….

a. - $\frac{3}{8}$ b . $\frac{8}{3}$ c . - $\frac{8}{3}$ d. $|- \frac{3}{8}|$

13) - $\frac{3}{4}$ ……………. - $\frac{1}{2}$

a. $>$ b . $<$ c. =

14) which of the following is an integer ?

a. 3.75 b.- $\frac{3}{7}$ c. $\frac{7}{7}$ d. $2\frac{1}{2}$

---

complete the following .

a) the smallest positive integer number is ………

b) absolute values of the opposite are ………….

c) $|-3|$ x $|-4|$ =…………

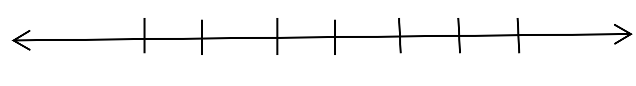
d) the number of integers between -5 and 2 ……………….

e) $-3\frac{1}{4}$ in the form $\frac{a}{b}$ is ………….

f) the integers between -4 and 1 are ……………

g) A negative number with an absolute value greater than 8 is …………

i) from the opposite number line the integer for point A is ……..and its opposite is …………………………



-1 0 3





1) -8 , |-7| , 2 , 0 , -5

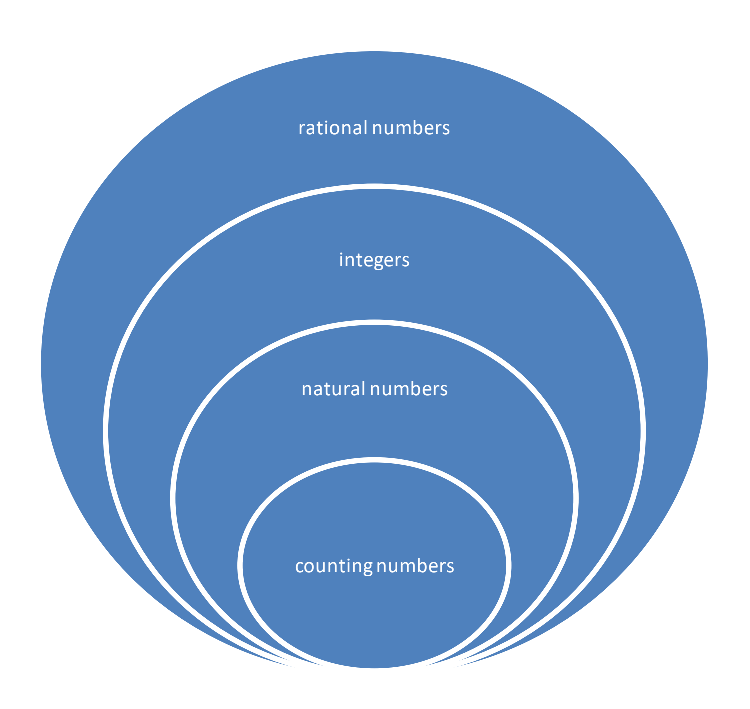
The order is :……………………………………………………………………

2) find a rational number lying between $\frac{3}{5}$ and $\frac{2}{3}$

……………………………………………………………………………………………….

3) write the following numbers in the opposite venn diagram.

34 , $2\frac{1}{4}$, 0.225 , -10 ,0 , $-\frac{7}{8}$



4) Represent $-3\frac{1}{4}$ on the number line .

……………………………………………………………………………………………



UNIT 3
ALGEBRAIC EXPRESSIONS

Lesson one : Creating mathematical expressions

Mathematical expressions are sorted into:

Numeric expressions

Are statements that contain only numbers separated by one or more operations from (+ , − , ×, ÷)

Examples : 3 + 5.8

Algebraic expressions

Are statement contain numbers and symbols (variables) separated by one or more operations from (+ , − ,×, ÷)

Examples :3X + 4Y

1) Classify the following mathematical expressions.

Mathematical expression	Algebraic expression	Numeric expression
9		
2 + 7.8		
3(6) + 2		
7(1.4 + 3.2)		
48 – 1		
$\frac{1}{4}$ m – 2		
2n		
3P + 4q		
5X + 3X – 1		
X – 36		
R + s – t		



2) *Write numeric or algebraic expression for each of the following :*

a) 8 K + 7 –1 (……….…..………..)

b) 89 (……….…..………..)

c) $\frac{3}{4}$z (……….…..………..)

d) 7 – 5 + 3 (……….…..………..)

e) 26 – 6 + 8 (……….…..………..)

f) 3a – 4b + c (……….…..………..)

g) 3x – 2x + 3 (…………………..)

h) 6 (5 – 3) + 2 (……….…..………..)

H.W

Mathematical expression	Algebraic expression	Numeric expression
12 + 5.8		
3K + 4		
8(1.4 – n)		
2(3) + 5		
3p – 4q + 1		
K + 3m –n		



Lesson two : Analyzing mathematical expressions

Contents of mathematical expression:

Term: Is a number, a variable or product of both 2 , 5X , 8 , 3Z , $\frac{3}{4}$ b , $\frac{5}{7}$

Constant: Is the term that doesn't contain variable 2 , $\frac{2}{5}$

Coefficient: Is the number that is multiplied by the variable like 5 in (5X)

Like terms All numerical terms are like 2, 8 , $\frac{3}{7}$

Algebraic term of the same variables are like 3X, 5X ,9X

1. **Complete the following table :**

Expression	Number of terms	Like terms
5		
8 + 2		
X + 12		
4n + 2n + 2		
6 + 3X + 3		
M + 3 +2n + 2		
16X + 2X		
8z + 3z + 9		
7X + 7X + 1 + 2X		





2. Complete the following table

Expression	Constant	coefficients
2a + 7 + 4a		
17 + 5 + x		
4x + 7x + 9		
$22 + \frac{1}{3}z + 2y$		
0.2q + 0.6r + 2y		
4a		
3		

3. Complete the following table

Expression	Number of terms	Like terms	constants	coefficients
7a – 4b + 7				
X + X + 4X				
6 – Z + 5				
18				
$\frac{1}{2}n - 2n + K$				
0.4a + 0.1a + 2a				
R				



H.W

Expression	Number of terms	Like terms	Constants	Coefficients
25n				
4n – 5 + 6n				
8z + g + z				
1000				
2m + 5				
K + 3 + 4k				
7				
$\frac{4}{5}$ b +5q – 7h				
8a				
3 + 5				
2 x 4				





Lesson three : Writing Algebric expression

Algebraic expression and written (verbal) expression

Addition	Subtraction	Multiplication	Division
• Add • Sum • Increased by • More than • Exceeds • Total • Plus • In all • Gain • deposit	• subtract • difference • decreased by • fewer • diminished by • minus • Take away • Withdraw • Reduced by • Less than • Magnitude of increase	• Multiplied by • Times • Product of • Double • Triple • twice	• Divide • quotient • per • divided equally • split into • fraction • ratio of • half • third

A. Write each of the mathematical expression using Verbal form (words):

1) X + 2

2) $\frac{12}{X}$

3) X – 5

4) 12x

5) XX

6) 2m + 7

7) 3(m+4)

8) 2(X + 5)

9) 8 – 3n

10) $\frac{1}{2}$ b + 15



B. <u>Select the algebraic expression that represent the verbal expression</u>

Twelve less than three groups of y 3Y – 12

1) 12 – 3Y
2) 3Y – 12
3) Y – 3 (12)
4) 12(3) - Y

C. <u>Record all verbal expressions that represent the expression 5 + 2X</u>

1) The sum of 2 and 5 multiplied by X
2) The product of 7 and X
3) The sum of 5 and the quantity 2 times X
4) The product of 2X and 5
5) The sum 2 times X and 5

D. <u>Record which expressions can be represented by an algebraic expression that contains addition.</u>

1) Take 14 away from a number
2) Ammar has 7 more tokens than Tamer
3) A number increased by 3.5
4) Baher put 12 more stickers in the sticker book
5) A student shared his oranges equally with his 2 friends

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E. <u>Write an algebraic expression for each of the following verbal expression.</u>

1) Add 6 to the number Y
2) Subtract 3 from the number X
3) Multiply 5 by the number Z
4) Divide the number n by 3
5) A number less than ten
6) A number less ten
7) A number less than six
8) A number less six
9) Nine more than a number X three times a number S
10) Product of a number X and 5.4
11) Quotient of a number v by 6
12) Three fifth a number m
13) Nine increased by a number five
14) A number Y decreased by 5
15) Add 3 to double of the number X
16) Subtract 5 from double of the number y
17) Twice the sum of a number and 3
18) The sum of four times a number and seven
19) Add 6 to one third of a number
20) 8 decreased by three times a number



F. Choose the correct answer

1) If we subtract 5 from the number X we get

a) 5X b) 5 – X c) X – 5 d) X + 5

2) Suzan saved L.E X and her father gave her L.E 10 she will have

a) X – 10 b) X + 10 c) 10X d) 10 – X

3) Subtracting 3 from double a number =

a) N – 3 b) 2n – 3 c) 3n + 2 d) 5n

4) Three times a number less two is

a) 3X + 2 b) 3X – 2 c) 2 ×3X d) 2 + 3X

5) If three times a number is added to 12, then the algebraic expression that express this is

a) q + 12 b) q – 12 c) 3q + 12 d) 3q – 12

6) Twice the sum of a number and five is ……

a) 2Y + 5 b) 2Y – 5 c) 2(Y + 5) d) 2(Y – 5)

7) Bassem is K years old now,how old will he be after 5 years?

a) 5K b) 5 ÷ K c) K – 5 d) K + 5

8) What operations are in the algebraic expression for “twice a number increased by three”?

a) + and – b) X and – c) X and + d) + and –

9) What verbal expression for 5X – 7 is ..

a) 5 multiplied by X increased by 7
b) 5 times a number X, lesss than 7
c) 5 times a number X, less 7
d) 7 decreased by 5X

Unit 1

Lesson 1: using long division in the real wourld

Ex1: divide using the standard division algorithm

a) 6 | 474 **b) 3 | 225** **c) 24 | 552**

Ex2: A hotel consists of 13 floors and each floor contains 325 rooms how many rooms are there in this hotel?

…………………………………………………………………………………………

……………………………………………………………………………………….

Ex3: Ali and his friends collected 216 pounds to distribute to the poor ,if this amount was distributed to 18 people ,How much was the share of each person?

…………………………………………………………………………………………

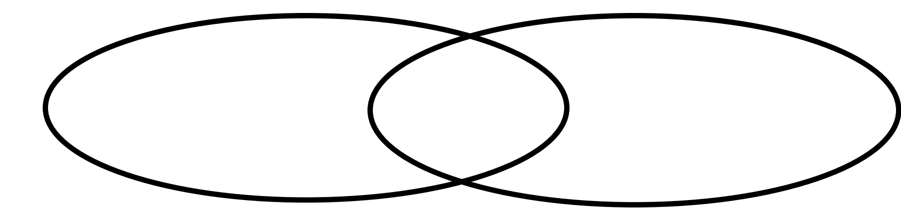
…………………………………………………………………………………………

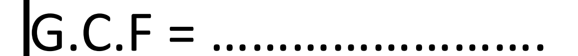
Lesson 2: factorize the number into its prime factors

Ex: use venn diagram to find (G.C.F) and (L.C.M) of each of the following :



a) 16 and 20



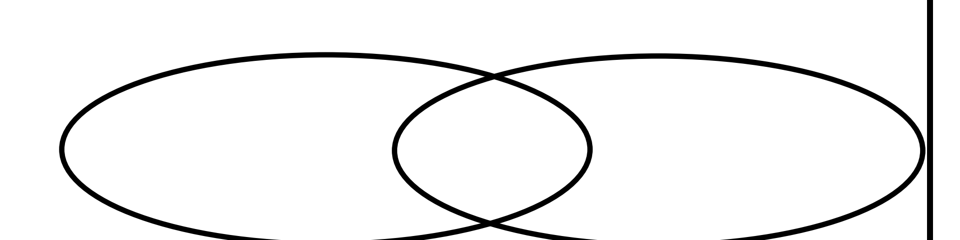


G.C.F = ……………………

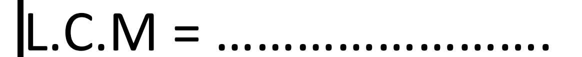
L.C.M = ……………………



b) 20 and 30

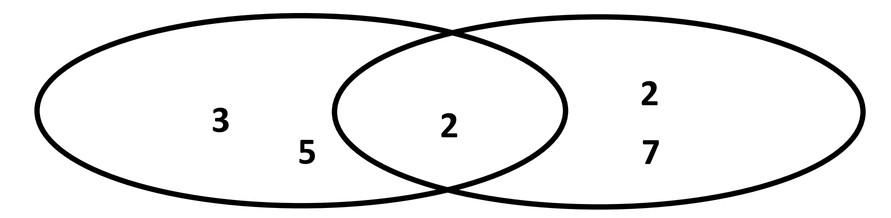


G.C.F =……………………



L.C.M = ……………………

Ex: using the following diagram,complete:



1) the two numbers represented in the venn diagram are ……. And ………

2) the common prime factors of the two numbers are ……….

3) the G.C.F for the two numbers is ……………..

4) the L.C.M for the two numbers is ……………..

Lesson3: writing expressions using G.C.F

Ex 1: complete the following

a) 5 X (7+5) = (5 X…..) + (….. X2)

b) 2 X (….. +…..) = (…… X 3) (…… X 5)

c) the G.C.F for 15 and 18 is ……………………..

d) the G.C.F of all numbers is ……………………

Ex 2: use the G.C.F to write the numerical expressions of each of the following

a) lina has 6 oranges and bananas what is the largest number of bags that can be made so that all bags include the same numbers of items ?

…………………………………………………………………………………………

…………………………………………………………………………………………

b) the students collected 30 boxes of cheese and 40 bags of legumes what is the largest number of baskets of food that can be prepared with out any food left ?

…………………………………………………………………………………………

…………………………………………………………………………………………

Lesson 4 : factorize the least common multiple

Ex)find the result

a) $\frac{3}{5} + \frac{1}{5}$ = ...

b) $\frac{1}{5} + \frac{1}{2}$ = ...

c) $\frac{1}{4} + \frac{1}{12}$ = ...

d) $\frac{5}{6} - \frac{1}{2}$ = ...

e) $1 + \frac{2}{9}$ = ...

f) $\frac{3}{4} + \frac{2}{3}$ = ...

g) $2\frac{1}{3} + 1\frac{1}{2}$ = ...

h) $3\frac{1}{3} - 1\frac{2}{3}$ = ...

i) $\frac{2}{5} + \frac{1}{3}$ = ...

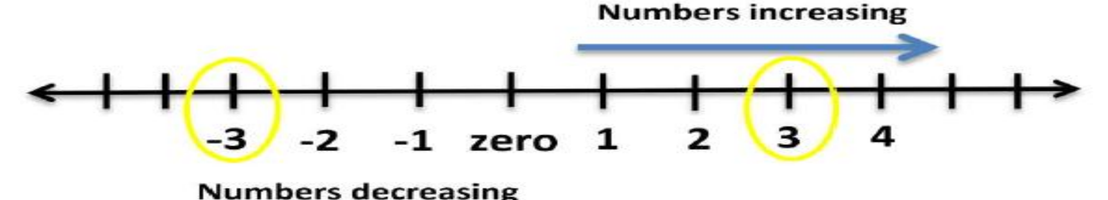
Unit 2

Lesson 1

Exercise1 :

Write an integer to represent each of the following situations:

1) the value of the profit is 25 Egyptian pounds. (………………)
2) the value of the loss is 3 pounds . (……………..)
3) the temperature is 10 degrees below zero. (……………..)
4) building height 12 meters. (……………..)
5) the drop is 19 m. underground. (…………….)
6) move 4 steps back. (……………..)



Exercice2: write the numbers indicated by the symbols shown on each of the horizontal number line and the vertical number line :

a…………………

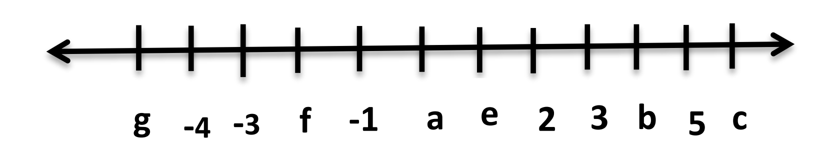
b…………………

c…………………

e…………………

f…………………

g…………………



Lesson 2

Put (> ,< , =):

-5	☐	9	7	☐	3	3	◯	-3
-1	☐	-12	-2	☐	4	-6	◯	-6
1	☐	0	7	☐	-7	-6	◯	5
5	☐	5	-1	☐	0	9	◯	0



Find the inverse (opposite):

-12 → .... -3 → ....

25 → .... 8 → ....

1 → .... -1 → ....

Choose the correct answer:

a) the number -3 is located to the right of the number .... on the number line .

(4 or 4 or 2 or 12)

b) the inverse of -12 is the number ....

(12 or 12 or 1 or 2)

c) the number .... is neither a positive nor a negative number.

(0 or 1 or 1 or 10)

Lesson 3

Classify all the following numbers according to the number groups shown :

	counting	natural	integers	Rational
5				
0				
-7				
3.5				
$\frac{3}{5}$				

Example 1 : Write the following rational numbers in fraction form:

A) 0.75 (b) -45 c) 4

d) 0 e) $3\frac{1}{5}$ f) -1.5

find the opposite number (additive inverse) of each of the following

1- - 0.8 .... 2- $-\frac{3}{4}$ .... 3- 6.3 ....

4- 2.5 .... 5- 0 .... 6- $3\frac{1}{7}$ ....

Put (< , > , =):

$\frac{2}{5}$ ☐ $\frac{3}{5}$ $-\frac{6}{7}$ ☐ $\frac{7}{7}$ $-\frac{2}{7}$ ☐ $-\frac{3}{4}$

$\frac{3}{8}$ ☐ $\frac{3}{5}$ $-\frac{2}{5}$ ☐ $\frac{2}{3}$ $\frac{2}{7}$ ☐ $\frac{1}{3}$

Lesson 4

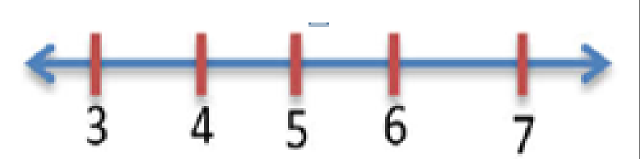
$-5\frac{1}{5}$, 2.2 , $-5\frac{1}{4}$, -5.5 , $2\frac{3}{4}$

ascending .... ، .... ، .... ، .... ، ....

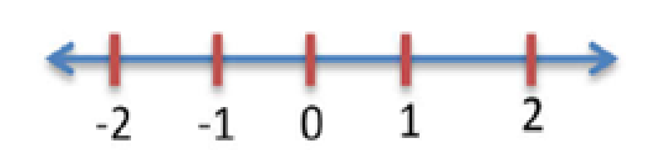
descending .... ، .... ، .... ، .... ، ....

Example : identify the following numbers on the number line :

$6\frac{3}{4}$ **Is lie between the numbers...........,...........**



$\frac{1}{2}$ **Is lie between the numbers...........,...........**



	2.5	- 0.8	5	$-3\frac{1}{2}$	$2\frac{3}{4}$
$\frac{a}{b}$	....	....	....	....	....
The inverse	....	....	....	....	....

Lesson 5

Find the value of each :

$|-5| =$ ....

$\left|-\frac{3}{4}\right| =$ ....

$\left|-7\frac{2}{3}\right| =$ ....

$|6| =$ ....

$|0.03| =$ ....

$\left|7\frac{3}{5}\right| =$ ....

Put (< , > , =):

$|-8.2|$ ☐ -7.9

$\left|-\frac{8}{3}\right|$ ☐ $\left|2\frac{2}{3}\right|$

$-3\frac{4}{5}$ ☐ $\left|-\frac{3}{2}\right|$

$|-9|$ ☐ $|-8|$

Ex : Arrange all of the following :

8 , | -3 | , -17 , -9 , | 27 |

Ascending ....

23 , | -7 | , -17 , -9 , | 27 |

descending ....

2.3 , | -7.5 | , -1.7 , -9.6 , | -3.5 |

Ascending ....

Lesson 6

Find each of the following :

$|-5|$ = ... $\left|\frac{7}{9}\right|$ = ... $|0.03|$ = ...

$|6|$ = ... $\left|-\frac{3}{4}\right|$ = ... $|7.04|$ = ...

Ex : Complete all of the following

1) If $|a| = 5$, then a = ...

2) If it is $|-7| = b$, then............

3) If $n = |9|$, then n = ..

4) $-|5|$ =...............

6) $|9|+|-9|$

7) What's the biggest? ....-7.2 or -7.22

Put (< , > , =):

$\left|-\frac{8}{3}\right|$ ☐ $\left|2\frac{2}{3}\right|$ $\left|3\frac{1}{4}\right|$ ☐ $\left|-7\frac{2}{5}\right|$

$4\frac{3}{4}$ ☐ $\left|2\frac{2}{3}\right|$ $|3.4|$ ☐ $|-3.4|$

Unit 3

Lesson 1:

1) classify the following mathematical expressions into numerical expressions or algebraic expressions :

5 / 2+7.8 / – / 7(1.4+3.2) / – / 2(m+7) / 54-2 / 5(7) +3 / –

Numerical expression	Algebraic expression (symbolic)

2) write an algebraic expression for each of the following:

a) if Bassem is x years old now , how old will he be after 5 years ?

………………………………………………………………………………………

………………………………………………………………………………………

B) suzan saved y L.E. and her father gave her L.E. 10 how much money suzan have ?

………………………………………………………………………………………

………………………………………………………………………………………

Lesson 2:

1) determine the number of terms and like terms for the following algebraic expressions :

Mathematical expression	Number of terms	like terms
6 5m+3m+2 7+9x+9 X+3+2y+2 4+8 5n+2n+10		

2) determine the constants and coefficients in each of the following algebraic expressions:

Mathematical expression	constants	Coefficients
16+3+y 5 20+ $\frac{1}{4}x$+3y 6a+2+3a 0.7 q + 0.2 r +0.8 m		

3) in the following algebraic expression ,

$10x+20x+25$

Determine:

a) number of terms:……………………………………………….

b) like terms: ……………………………………………………

c) constants:……………………………………………………

d)coefficients:…………………………………………………

Lesson 3

1) write each of the following algebraic expression in verbal expression

a) $m + 8$

b) $x - 10$

c) $v \div 4$

d) $3Y$

e) $\frac{Z}{2}$

2) write the algebraic expression for each of following verbal expression

a) the sum of 3 and 5 multiplied by X

b) the product of 2 and y

c) the product of 4 X and 2

d) the sum of 5 and the quantity 2 times C

Unit (1) Assessment

[1] Choose the correct answer:

(1) If 384 ÷ 16 = 24, then the dividend is ....

ⓐ 384 ⓑ 16 ⓒ 24 ⓓ 0

(2) If 40 ÷ 5 = 8, then the remainder is ....

ⓐ 40 ⓑ 5 ⓒ 8 ⓓ 0

(3) If 29 ÷ 3 = 9 R2, then the divisor is ....

ⓐ 29 ⓑ 3 ⓒ 9 ⓓ 2

(4) The GCF of 6 and 8 is ....

ⓐ 1 ⓑ 2 ⓒ 3 ⓓ 4

(5) The common factor of all numbers is ....

ⓐ 0 ⓑ 1 ⓒ 2 ⓓ 3

(6) The GCF of any two relatively prime numbers is ....

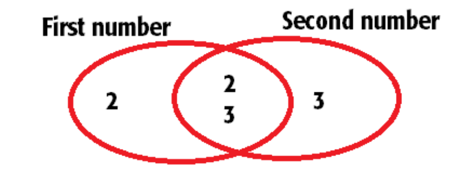
ⓐ 0 ⓑ 1 ⓒ 2 ⓓ 3

(7) The common multiple of all numbers (except zero) is ....

ⓐ 0 ⓑ 1 ⓒ 2 ⓓ 3



[2] From the opposite Venn diagram, Complete:



(1) The GCF of the two numbers is ....

(2) The LCM of the two numbers is ....

(3) The first number is ....

(4) The second number is ....

[3] Essay Problems:

(1) Salma bought $3\frac{1}{2}$ kg of tomatoes and $1\frac{1}{4}$ kg of onions. How many kilograms of vegetables did she buy?

....

(2) Ali bought a bottle of juice contains $1\frac{1}{2}$ liters. He drank $\frac{2}{5}$ Liters. How many liters of juice were left?

....



Unit (2) Assessment

[1] Choose the correct answer:

(1) The number -7 is located to the right of the number .... on the number line.

ⓐ -8 ⓑ 8 ⓒ -6 ⓓ 6

(2) The number .... is neither negative nor positive.

ⓐ 0 ⓑ 1 ⓒ -1 ⓓ 10

(3) The smallest non-negative integer is ....

ⓐ -1 ⓑ 1 ⓒ 100 ⓓ 0

(4) -0.3 = ... (in the form $\frac{a}{b}$)

ⓐ $\frac{10}{3}$ ⓑ $\frac{-3}{1}$ ⓒ $\frac{-1}{3}$ ⓓ $\frac{-3}{10}$

(5) $|-3.7|$ = ...

ⓐ 3.7 ⓑ 37 ⓒ -3.7 ⓓ -37

(6) The absolute value of zero = ...

ⓐ 1 ⓑ 10 ⓒ 0 ⓓ -1

[2] Complete:

(3) The greatest non-positive integer is ....

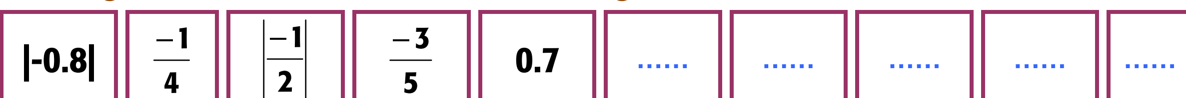
(4) The smallest positive integer is ....

(5) The integer that represents 7 °C below zero is ....

(6) The integer that comes just after -8 is ....

(7) If $|a| = 8$, then a = ... or ....

[3] Order the given set of numbers from least to greatest:



[4] Complete using (<) , (>) , or (=):

(1) -3.8 [......] -1.8 **(2)** $-3\frac{7}{8}$ [......] $\left|-3\frac{5}{8}\right|$

(4) $\left|\frac{2}{5}\right|$ [......] $|-0.4|$ **(5)** $|-2.5|$ [......] $|-3.6|$

Unit 3 Concept 1

[1] Choose the correct answer:

(1) The algebraic expression $\frac{1}{5}$ k consists of …… factors.

a) 1   b) 2   c) 3   d) 4

(2) In the algebraic term 9 z y^2 the coefficient = …….

a) 9   b) 2   c) 3   d) 4

(3) The algebraic term -5 x z has ……. Factors.

a) 1   b) 2   c) 3   d) 4

(4) The number of terms that make up the algebraic expression (5 m + 2 n – 9) is ……

a) 1   b) 2   c) 3   d) 4

(5) The like terms in the algebraic expression (5 m + 2 n – 9 m + 2) are ……

a) 2 n , 2   b) 5 m , - 9 m   c) 5 m , 2 n   d) nothing



[2] Complete:

(1) The algebraic factor in the term 8.5 k^2 is ....

(2) The coefficient of algebraic term 5 x^2 y is ....

(3) The number of terms and the algebraic expression 3 m – 2 n + 8 is ....

(4) Like terms in the algebraic expression 3 a + 2 b – 5 a + 9 are ....

(5) The constant in the algebraic expression 5 k + 8 is ....

(6) The number of variables in the algebraic expression 3x y +2 z +5 m is ....

(7) The coefficients in the algebraic expression 5 k + 3 m – 8 are ....

(8) Two numbers the sum of them is 10 if first one is "x" so the second one is ....

(9) Ahmed and Tamer have 60 pounds if Ahmed has "x" pounds, then Tamer has .... pounds.



Q1: Choose the correct answer:

1) If 384 ÷ 16 = 24 , then the dividend is ....
(348 or 16 or 24 or 0)

2) Farida made 47 cookies which she will distribute equally in tiny glass jars. If each jar is to contain 6 cookies each, how many cookies will not be placed in a jar?
(47 or 5 or 6 or 7)

3) Murad has 120 crayons distribute them among 6 of his friends, how many crayons are left?
(0 or 1 or 2 or 3)

4) The common factor of all numbers is ....
(0 or 1 or 2 or 3)

5) The greatest common factor of 6 and 8 is ....
(4 or 1 or 2 or 3)

6) The common multiple of all factors is ....
(0 or 1 or 2 or 3)

7) The following Venn diagram represents the prime factorization of two numbers which are ......
(3 and 5 or 2 and 3 or 2 and 5 or 6 and 10)

5	2	3

8) The G.C.F of any two prime numbers is ....
(0 or 1 or 2 or 3)

9) The following expression represents the greatest number of bags can be made from potatoes and carrot respectively: (6 × 6) + (6 × 3) then the total number of carrots in all bags is ....
(6 or 36 or 18 or 9)

10) The following expression represents the greatest number of bags can be made from mangos and bananas respectively, then the number of all bags is ....
(4 or 9 or 6 or 36)

2	2, 3	3

11) The following expression represents the greatest number of baskets water and juice bottles respectively: (10 × 3) + (10 × 5)
, then the number of all bottles in each basket is ....

(10 or 8 or 15 or 80)

12) The equivalent fraction of $\frac{12}{15}$ is ....

($\frac{2}{5}$ or $\frac{3}{4}$ or $\frac{4}{5}$ or $\frac{1}{3}$)

13) $2\frac{3}{4} + 1\frac{2}{3}$ = ...

($3\frac{5}{12}$ or $4\frac{5}{12}$ or $\frac{17}{12}$ or 4)

14) 984 ÷ 5 = ...

(196 R 0 or 5 R 4 or 196 R 4 or 196 R 5)

15) Ahmed saves 45 L.E weekly, After how many weeks will he save 720 L.E?

(32,400 or 765 or 16 or 675)

16) Which of the following are relatively prime numbers ?

(4 and 8 or 12 and 18 or 2 and 12 or 9 and 4)

17) 20 + 25 = ...

(2 (0 + 5) or 5 (5 + 2) or 5 (5 + 4) or 20 [0 + 5])

18) From the opposite venn diagram, the expression is ....

2	2, 5	7

(10 (6 + 35) or 3 (10 + 7) or 7 (10 + 3) or 10 (2 + 7))

19) 8 [3 + 5] = ...

(24 + 13 or 3 (8 + 5) or 24 + 40 or 11 + 13)

20) The GCF of 5 and 29 is ....

(0 or 1 or 5 or 29)

21) 13,510 ÷ 23 = 587 R ....

(9 or 8 or 7 or 6)

22) The LCM of two relatively prime numbers is ....

(0 or 1 or their sum or their product)

23) 8 and .... are two relatively prime numbers.

(4 or 12 or 21 or 24)

24) .... x (5 + 1) = (7 x 5) + (7 x 1)

(6 or 35 or 1 or 7)

Q2: Complete the following:

1) If 6,048 ÷ 24 = 252, then 24 x 252 = ...
2) The number which if we divided by 34, the quoient will be 102, and the remainder is 11, is ....
3) The smallest prime number is ....
4) The smallest odd prime number is ....
5) The only even prime number is ....
6) The prime factors of 15 are ....
7) The least common multiple of the two relatively prime number is ....
8) The greatest 2-digit prime number is ....
9) The prime number has only .... factor(s).
10) All prime numbers are odd except ....is an even number.
11) The common multiple of all numbers is ....
12) The common factor of all number is ....
13) A number whose prime factors are 2, 3, 7 is ....
14) Prime factors of 24 are ....
15) The GCF of two prime numbers is ....
16) 5 x (........ + ...) = (.......... x 2) + (.......... x 4)
17) $2\frac{1}{3} + 1\frac{1}{4}$ = ...
18) .... - $1\frac{2}{3} = 2\frac{1}{4}$
19) $3\frac{1}{2}$ - .... = $1\frac{3}{8}$

Q3: Answer the following:

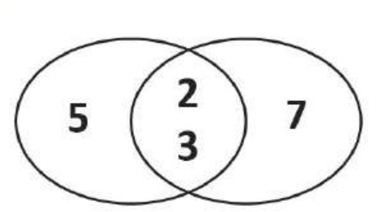
1) Ahmed has 1,378 oranges and need to pack them up equally in 25 boxes. How many oranges in each box?

2) A primary school is planning to a trip to the museum. There are 464 students. If each bus has 45 seats, how many buses will be needed to fill all the students?

3) The students collected 20 boxes of cheese and 40 bags of legumes. What is the largest number of baskets of food that can be prepared without any food left?

4) Karim 48 pencils and 18 crayons. What is the numerical expression of the greatest number of sets that can be made so that all sets include the same number of items?

5) The two numbers represented in the venn digram are .... and ....



- The common prime factors of the two numbers are ....
- The GCF of the two numbers is ....
- The LCM of the two numbers is ....
- Are the two numbers relatively prime number?

(Yes or No)

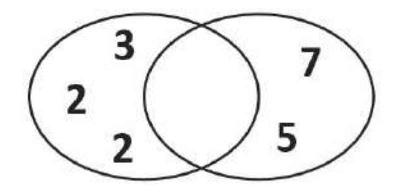
6) The two numbers represented in the venn digram are .... and ....

- The common prime factors of the two numbers are ....



- The GCF of the two numbers is ....
- The LCM of the two numbers is ....
- Are the two numbers relatively prime number?

(Yes or No)



7) Nour prepared bags contain snacks. She has 6 oranges and 18 pieces of fruit, Nour wants the snacks in bags to be distributed evenly without any food left. How many bags of snacks can Nour Prepare?

8) Murad bought a pen for $9\frac{1}{2}$ pounds, a ruler for $5\frac{1}{4}$ pounds, and a notebook for 4 pounds.
How much did Murad pay?

9) Find GCF and LCM of 12 and 18 by factorization.

10) Use venn digram to find GCF and LCM of :

a) 15 and 10

b) 27 and 4

Q1: Choose the correct answer:

1) The number -3 is .... number.
(positive or Negative or integer or counting)

2) Which of the following is a counting number.
(0 or -5 or 6 or -7)

3) The smallest non-negative integer is ....
(1 or -1 or 0 or -10)

4) The greatest negative integer is ....
(1 or 0 or -1 or -10)

5) The integer numbers consist of negative numbers and .... numbers.
(positive or natural or counting or otherwise)

6) An integer included between -4 and 2 is ....
(-5 or -1 or 2 or 3)

7) The integer which comes just before -6 is ....
(-5 or 7 or -7 or 5)

8) The integer which comes just after -11 is ....
(-10 or -12 or 10 or 12)

9) The number of integers included between -2 and 4 is ....
(4 or 5 or 6 or 3)

10) The number of integers on the number line is ....
(1 or 100 or 0 or infinite)

11) -5 is located to the right of the number .... on the number line.
(-6 or 6 or -4 or 4)

12) The opposite of 0 is ....
(1 or -1 or 0 or -10)

13) The additive inverse of -12 is ....
(-12 or 1 or 12 or 2)

14) The opposite of 5 > ....
(-6 or 4 or -4 or 6)

15) All positive number are .... zero.
(equal to or less than or greater than or otherwise)

16) The largest non-positive integer is ....

(1 or -1 or 0 or -100)

17) The number -2.5 is a/an .... number.

(counting or integer or rational or natural)

18) The sum of any two opposite numbers is ....

(1 or 2 or 0 or -1)

19) Ahmed deposit of 500 L.E in the bank represents as ....

(500 or -500 or 50 or -50)

20) Which of the following is closer to the zero?

(-7 or -4 or 2 or 5)

21) The smallest counting number is ....

(1 or 0 or -1 or -10)

22) All integers are .... numbers.

(counting or natural or even or rational)

23) $-2\frac{3}{4}$ is between the two whole numbers.

(2, 3 or 1, 2 or -2, -3 or -1, -2)

24) The set of integer numbers .... the set of rational numbers.

(belong to or not belong or subset to or not subset to)

25) The set of integer numbers .... the set of counting numbers.

(belong to or not belong or subset to or not subset to)

26) -7 .... the set of natural numbers.

(belong to or not belong or subset to or not subset to)

27) 0 .... the set of counting numbers.

(belong to or not belong or subset to or not subset to)

28) The set of counting numbers .... the set of natural numbers.

(belong to or not belong or subset to or not subset to)

29) $\frac{5}{6}$ .... the set of rational numbers.

30) $-2\frac{5}{3}$ in a form of $\frac{a}{b}$ is written as ....

($\frac{11}{3}$ or $\frac{-25}{3}$ or $\frac{-11}{3}$ or $\frac{-7}{3}$)

31) The set of rational numbers .... the set of natural numbers.

(belong to or not belong or subset to or not subset to)

32) The opposite of $|-4|$ is ....

(4 or -4 or 0 or otherwise)

33) $|-2|$ x 10 = ...

(20 or -20 or 2 or otherwise)

34) The distance between -4 and its opposite on the number line is .... unit(s).

(zero or 4 or 8 or -8)

35) The larger absolute value, the .... zero.

(closer to or farther to or equal to or otherwise)

36) The absolute value of 6.3 is ....

(6.3 or -3.6 or 3.6 or -6.3)

37) If $|x|$ = 5, then x = ...

(-5 or 0 or 5 , -5 or 5)

38) The distance between the opposite of 4 and 0 is ....

(4 or 0 or -4 or 8)

39) The smallest number from the following is ....

(-7 or -1 or 2 or $|-15|$)

40) The best subset of the number -10 is ....

(rational or integer or natural or counting)

41) .... is lying between 3.14 and 3.2

(3.15 or 3.21 or 3.20 or 3.22)

42) The number of rational numbers between $\frac{3}{5}$ and $\frac{4}{5}$ is ....

(3 or 0 or 2 or infinite)

43) The number of integer numbers lying between $\frac{3}{5}$ and $\frac{16}{5}$ is ....

(3 or 0 or 2 or infinite)

44) The number of integer numbers lying between 3.1 and 3.2 is ....

(3 or 0 or 2 or infinite)

45) A negative number with an absolute value greater than 13 is ....

(10 or -9 or 17 or -14)

46) $|-8|$ > ....

($|-9|$ or $|-7|$ or 9 or 8)

Q2: Complete the following:

1) The smallest positive integer number is ....
2) The number of integers between - 5 and 2 is ....
3) The integers between - 6 and 2 are ....
4) Thesmallest counting number is ....
5) The additive inverse of - 5 is ....
6) The number just come after - 6 is ....
7) The number just come before - 9 is ....
8) The rational number - 6.25 is lying between two whole numbers ...... and ......
9) Opposite numbers on a number line have the .... absolute values.
10) $-\frac{3}{5}$ in the decimal form is ....
11) - [- 5] = ...
12) $-\left|-3\right|$ = ...
13) - 6 in form of fraction is ....
14) The best subset of number 0 is ....
15) Integers between - 3 and 2 on the number line are ....
16) The integer that express " move forward 6 steps" is ....
17) - 5 is located to the left of the number .... on the number line.
18) If $|x| = 7$, then x = ... or ....
19) 0 .... to set of rational numbers.
20) $\frac{15}{5}$ .... to set of counting numbers.
21) set of rational numbers .... to set of integer numbers.
22) Set of counting numbers .... to set of natural numbers.
23) The smallest non-negative integer is ....
24) The greatest non-positive integer is ....
25) The number - 1.5 in fraction form is ....



Q3: Answer the following:

1) Arrange the following in ascending order:

$2.8 \ , \ -1.9 \ , \ |-6.5| \ , \ 0 \ , \ -0.5$

The order: ………… , ………… , …………, …………, …………

$3 \ , \ -\frac{7}{2} \ , \ \frac{5}{2} \ , \ 3\frac{1}{4} \ , \ 0 \ , \ -11$

The order: ………… , ………… , …………, …………, …………, …………

2) Arrange the following in descending order:

$7.5 \ , \ -2\frac{1}{3} \ , \ -\frac{8}{9} \ , \ |-1| \ , \ |-3.5|$

The order: ………… , ………… , …………, …………, …………

$-1\frac{1}{3} \ , \ 2\frac{1}{2} \ , \ -4\frac{1}{2} \ , \ -\frac{3}{4} \ , \ 1\frac{1}{2}$

The order: ………… , ………… , …………, …………, …………

3) Write two rational numbers lying between each of the following pairs of numbers:

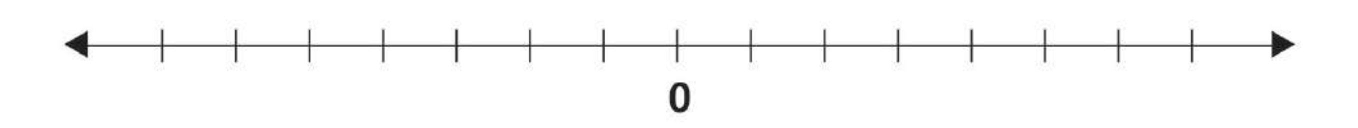
1) - 5.1 and 5.2

2) $\frac{2}{3}$ and $\frac{4}{5}$

3) 2.5 and 2.6

4) Locate each of the following points on the number line:

Point	A	B	C	D	E	F	G	H
Number	5	0	-2	3	-1	1	-4	2



Q1: Choose the correct answer:

1) Which of the following is an algebraic expression?
(44 - 3 x 4 or 3 + 5 or 4m +3 or 2 + 3 - 1)

2) The coefficients in the algerbraic expression 5 + 3y + 2k - 9 are ....
(5, 9 or 3, 2 or 3, 2, 5, 9 or otherwise)

3) 3 + 5(.......) + 7, complete to get a numeric expression.
(a or k or 7 + 3 or b + c)

4) Which of the following are like terms?
(25, 32 or ab, da or ab, aq or l, m)

5) The constant in the expression 3y + 5 is ....
(3 or 3y or 3y + 5 or 5)

6) The number of terms of the expression: 5 - 2m - 3m + 4 is ....
(5 or - 2 or - 3 or 4)

7) In the algebraic expression : 5x - 4 + 5m + 3, the two like terms are ....
(3 and 5m or 3x and 5m or 3 and - 4 or 5x and 3)

8) Twice the difference of a number and 5 is ....
(2y + 5 or 2y - 5 or 2(y + 5) or 2 (y - 5))

9) Eslam is x years old now , how old will he be after 6 years ?
(x ÷ 6 or 6x or x + 6 or x - 6)

10) Ahmed now y years old. how old was he 3 years ago?
(y ÷ 3 or 3y or y + 3 or y - 3)

11) A square of side length “m” cm, has perimeter of .... cm.
(m ÷ 4 or 4m or m + 4 or m - 4)

12) If we subtract 4 from number m the result is ....
(4 - m or 4m or m + 4 or m - 4)

13) Murad and farida have 70 pounds, if what Murad has is k pounds, then what farida has is .... pounds.
(70 + k or 70 - k or 70 k or 70 ÷ k)

Q2: Complete the following:

1) The algebraic expression for "a number less 7', is ....
2) The verbal expression for"2m - 7" is ....
3) The number of terms of the expression: 3 + 4x is ....
4) The constant in the expression 3 y + 2 x - 5 is ....
5) The coefficient of 2 + 3 a - 5 is ....
6) "4 increased by m" in algebraic expression is ....
7) The verbal form of "2 x + 3" is ....
8) The like terms in the expression : 2 x + 3 x + 3 are ....
9) The algebraic expression of "subtract 3 from k" is ....
10) Twice the sum of a number and five is ....

Q3: Answer the following:

1) A square of side length L, write an algebraic expression for the perimeter of this square? ______

2) Write verbal expression for each of the following algebraic expression:

a. 3(m + 4) ______

b. 8 - 3n ______

c. $\frac{1}{2}$ k + 9 ______

3) write an algebraic expression for each of the following verbal expressions:

a. Product of a number p and 75 is ....
b. Three fifths a number n is ....
c. 8 decreased by three times a number is ....
d. Twice the sum of a number and three is ....
e. Add 6 to one third of a number is ....
f. The quotient of a number by 8 is increased by 12 is ....

Q1: Choose the correct answer:

1) 384
2) 5
3) 0
4) 1
5) 2
6) 0
7) 6 and 10
8) 1
9) 18
10) 6
11) 8
12) $\frac{4}{5}$
13) $4\frac{5}{12}$
14) 196 R 4
15) 16
16) 9 and 4
17) 5 (5 + 4)
18) 10 (2 +7)
20) 24 + 40
21) 9
22) their product
23) 21
24) 7

Q2: Complete the follwoing:

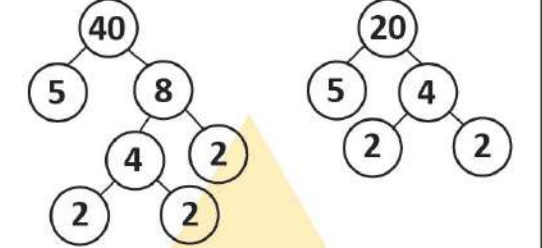
1) 6,048
2) 3,479
3) 2
4) 3
5) 2
6) 3, 5
7) their product
8) 97
9) 2
10) 2
11) 0
12) 1
13) 42
14) 2, 2, 2 and 3
15) 1
16) 2 , 4
17) $3\frac{7}{12}$
18) $\frac{7}{12}$
19) $2\frac{1}{8}$

Q3: Answer the following:

1) Number of oranges in the box = 1,378 ÷ 25 = 55 R 3
2) Number of buses needed = 464 ÷ 45 = 10 R 14
3) 40 = 2 x 2 x5 x2

   20 = 2 x 2 x5

   The expression: 20 (1 + 2)



4) 48 = 2 x 3 x 2 x 2 x 2 → 8 +

   18 = 2 x 3 x 3

   Expression: 6 (8 + 3)
5) numbers are : 30 and 42

   Common factors : 2 and 3

   GCF: 6

   LCM: 210 No
6) Numbers are : 12 and 35

   Common factors: 1

   GCF: 1

   LCM: 420 Yes
7) 18 = 2 x 3 x 3

   6 = 2 x 3

   Expression: 6 (1 + 3), So Number of bags is 6
8) Murad pay = $9\frac{1}{2} + 5\frac{1}{4} + 4 = 18\frac{3}{4}$
9) 18 = 2 x 3 x 3

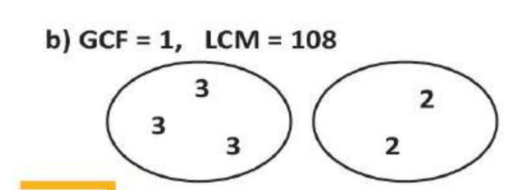
   12 = 2 x 3 x2

   GCF = 2 x 3 = 6

   LCM = 2 x 3 x 3 x 2= 36
10) a) GCF = 5, LCM = 30

   3 | 5 | 2

   b) GCF = 1, LCM = 108



Q1: Choose the correct answer:

1) Integer
2) 6
3) 0
4) -1
5) natural
6) -1
7) -7
8) -10
9) 5
10) infinite
11) -6
12) 0
13) 12
14) -6
15) greater than
16) 0
17) rational
18) 0
19) 500
20) 2
21) 1
22) rational
23) -2, -3
24) subset
25) not subset
26) not belong
27) not belong
28) subset
29) subset
30) $\frac{-11}{3}$
31) not subset
32) -4
33) 20
34) 8
35) farther to
36) 6.3
37) 5, -5
38) 4
39) -7
40) integer
41) 3.15
42) infinite
43) 3
44) 0
45) -14
46) | -7 |

Q2: Complete the following:

1) 1
2) 6
3) -5, -4, -3, -2, -1, 0, 1
4) 1
5) 5
6) -5
7) -10
8) -6 and -7
9) equal
10) - 0.6
11) 5
12) -3
13) $\frac{-6}{1}$
14) natural
15) -2, -1, 0, 1
16) 6
17) - 4
18) 7 or -7
19) belong
20) belong
21) not subset
22) subset
23) 0
24) 0
25) $\frac{-15}{10}$

Q3: Answer the following:

1) The order: - 1.9 , - 0.5 , 0 , 2.8 , | - 6.5 |

- The order: -11 , $\frac{-7}{2}$, 0 , $\frac{5}{2}$, 3 , 3 $\frac{1}{4}$

2) The order: 7.5 , | - 3.5 | , | - 1 | , $\frac{-8}{9}$, - 2 $\frac{1}{3}$

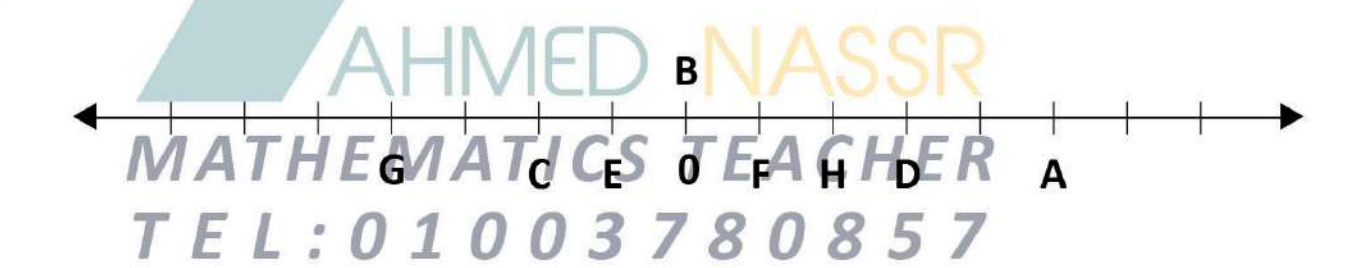
- The order: 2 $\frac{1}{2}$, 1 $\frac{1}{2}$, $\frac{-3}{4}$, - 1 $\frac{1}{3}$, - 4 $\frac{1}{2}$

3) 1) - 5.11 , - 5.12 (Answer may vary)

2) $\frac{21}{30}$, $\frac{22}{30}$ (Answer may vary)

3) 2.51 , 2.52 (Answer may vary)

4)



Q1: Choose the correct answer:

1) 4m + 3
2) 3, 2
3) 7 + 3
4) 25, 32
5) 5
6) 4
7) 3 and - 4
8) 2(y - 5)
9) x + 6
10) y - 3
11) 4m
12) m - 4
13) 70 - k

Q2: Complete the following:

1) 7 - m
2) double a number decreased by 7 (Answers may vary)
3) 2
4) -5
5) 3
6) 4 + m
7) two times a number added to 3 (Answers may vary)
8) 2x, 3x
9) k - 3
10) 10) 2(k + 5)

Q3: Answer the following:

1) 4L
2) a. three times the sum of m and 4 (Answers may vary)
   b. three times a number less than 8 (Answers may vary)
   c. Half a number added to 9 (Answers may vary)
3) a. 75 p
   b. $\frac{3}{5}$ n
   c. 8 - 3x
   d. 2(k + 3)
   e. 6 + $\frac{1}{3}$ m
   f. (x ÷ 8) + 12





Question 1 Choose the correct answer.

1. In the equation : 1,600 ÷ 25 = 64 the quotient is ....
   a) 1,600 b) 25 c) 64 d) zero

2. 820 ÷ 24 = 34 R ....
   a) 9 b) 8 c) 7 d) 4

3. 5,262 ÷ 57 = 92 R ....
   a) 18 b) 57 c) 92 d) 0

4. 3,548 ÷ 23 = ... R 6
   a) 154 b) 23 c) 514 d) 6

5. 2525 ÷ 25 = ...
   a) 11 b) 101 c) 105 R 1 d) 100 R 5

6. Karma saves 455 L.E. weekly. How much did she save daily?
   a) 15 b) 65 c) 3185 d) 45

7. If the price of 15 same books is 3,645 L.E. , then the price of each one is ..................L.E.
   a) 234 b) 243 c) 324 d) 423

8. 2,574 ÷ 7 = ...
   a) 376 R 5 b) 367 R 5 c) 367 d) 376

9. In the opposite Venn diagram, the L.C.M is ....
   a) 0 b) 1
   c) 10 d) 21

   (Venn diagram: 3 | 7)

10. In the opposite Venn diagram, the G.C.F is ....
    a) 1 b) 6
    c) 30 d) 90

    (Venn diagram: 5 | 2, 3)

11 In the opposite Venn diagram, the G.C.F is ....

a 30
b 1
c 90
d 6

12 In the opposite Venn diagram, the value of X is ....

a 5
b 6
c 10
d 30

13 .... is a multiple of any number.

a 0
b 1
c 2
d 3

14 Which of the following are relatively prime numbers ? ....

a 3 and 9
b 6 and 8
c 5 and 7
d 14 and 15

15 Which of the following are relatively prime numbers ? ....

a 8 and 9
b 7 and 14
c 5 and 10
d 2 and 3

16 20 + 25 = ...

a 2 (0 + 5)
b 5 (2 + 5)
c 5 (4 + 5)
d 20 (0 + 5)

17 From the opposite Venn diagram the expression is ....

a 10 (15 + 10)
b 3 (10 + 5)
c 5 (10 + 3)
d 10 (3 + 5)

18 8 (3 + 5) = ...

a 24 + 13
b 3 (8 + 5)
c 24 + 40
d 11 + 13

19 $\frac{1}{4} + \frac{2}{4} + \frac{3}{4} + \frac{2}{4} =$ ....

a 2
b 1
c $\frac{7}{8}$
d $\frac{5}{8}$

20 $\frac{5}{6} - \frac{3}{4} =$ ....

a $\frac{1}{2}$
b $\frac{8}{10}$
c $\frac{1}{12}$
d $\frac{1}{24}$

21 The smallest number from the following is ....

ⓐ −51 ⓑ −11 ⓒ 52 ⓓ −18

22 The opposite of −5 is ....

ⓐ −5 ⓑ 5 ⓒ 0 ⓓ 10

23 The opposite of the opposite of 2 is ....

ⓐ −2 ⓑ −(−2) ⓒ 0 ⓓ 4

24 The integer which comes just next −1

ⓐ −2 ⓑ 0 ⓒ 1 ⓓ 2

25 The smallest natural number is ....

ⓐ −2 ⓑ 0 ⓒ −1 ⓓ 1

26 The smallest counting number is ....

ⓐ −1 ⓑ $\frac{5}{5}$ ⓒ 0.1 ⓓ $\frac{10}{5}$

27 The smallest non-negative integer is ....

ⓐ −2 ⓑ −1 ⓒ 0 ⓓ 1

28 The greatest negative integer is ....

ⓐ −2 ⓑ −1 ⓒ 0 ⓓ −(−1)

29 Which of the following numbers is an integer ? ....

ⓐ $\frac{15}{6}$ ⓑ $\frac{15}{4}$ ⓒ $-\frac{15}{3}$ ⓓ $-\frac{15}{2}$

30 Which of the following numbers is an integer ? ....

ⓐ $\frac{5}{2}$ ⓑ $-\frac{4}{8}$ ⓒ 2.1 ⓓ $-\frac{25}{5}$

31 All the following numbers are rational except ....

ⓐ 0 ⓑ $\frac{3}{7-7}$ ⓒ $\frac{5-5}{8}$ ⓓ $\frac{1}{5-3}$

32 The number −1.2 in the form $\frac{a}{b}$ is ....

ⓐ $-\frac{1}{2}$ ⓑ $-\frac{2}{1}$ ⓒ $-\frac{12}{10}$ ⓓ $-2\frac{1}{10}$

33 The number $-2\frac{1}{4}$ in the form $\frac{a}{b}$ is ....

ⓐ $-\frac{4}{9}$ ⓑ $-\frac{9}{4}$ ⓒ $-\frac{7}{4}$ ⓓ $-\frac{21}{4}$

34 .... is lying between 3.14 and 3.2

ⓐ 3.15 ⓑ 3.21 ⓒ 3.20 ⓓ 3.22

35 The number of rational numbers lying between $\frac{1}{4}$ and $-\frac{1}{4}$ is ....

ⓐ 0 ⓑ 1 ⓒ 2 ⓓ an infinite numer

36 The opposite of zero is ....

ⓐ −1 ⓑ 0 ⓒ 1 ⓓ has no opposite

37 The additive inverse of $-\left|-\frac{1}{2}\right|$ is ....

ⓐ $-\frac{1}{2}$ ⓑ 0 ⓒ $\frac{1}{2}$ ⓓ − 0.2

38 If $|x| = 7$, then x = ...

ⓐ 7 ⓑ − 7 ⓒ 7 or − 7 ⓓ otherwise

39 If $|-11| = x$, then x = ...

ⓐ −11 ⓑ 11 ⓒ 1 ⓓ − 1

40 $\left|-2\frac{1}{4}\right| \div \left|\frac{1}{2}\right|$ is ....

ⓐ $4\frac{1}{2}$ ⓑ 4 ⓒ $4\frac{1}{4}$ ⓓ $\frac{9}{8}$

41 $|4| - \left|-2\frac{1}{3}\right|$ is ....

ⓐ 2 ⓑ $2\frac{1}{3}$ ⓒ $6\frac{1}{3}$ ⓓ $1\frac{2}{3}$

42 Set of integers subset of set of .... numbers

ⓐ counting ⓑ natural ⓒ prime ⓓ rational

43 The number 2.024 belongs to .... numbers

ⓐ counting ⓑ natural ⓒ integer ⓓ rational





44 The number of terms of the expression : 5 - m - 2 m + 7 is ....

ⓐ - 1 ⓑ - 2 ⓒ 4 ⓓ 7

45 In the algebraic expression : - 5 x - 4 + 5 y + 5 , the two like terms are ....

ⓐ 5 and 5 y ⓑ -5 x and 5 y ⓒ -4 and 5 ⓓ -5 x and 5

46 Which of the following are like terms ? ....

ⓐ 25 , 52 ⓑ ab , bc ⓒ ab , aq ⓓ m , n

47 The coefficient in the algebraic expression : 7 y - 1 is ....

ⓐ 7 y ⓑ 7 ⓒ y - 1 ⓓ - 1

48 The coefficient in the algebraic expression : 2 - 3 m + 1 is ....

ⓐ 2 ⓑ 3 ⓒ 1 ⓓ -3

49 The coefficients in the algebraic expression : 2 - 5 m - y are ....

ⓐ 5 and 1 ⓑ - 5 and 1 ⓒ - 5 and - 1 ⓓ 2 and - 5

50 The constants in the algebraic expression : - 3 y - 2 + 3 y + 1 are ....

ⓐ - 3 , 3 ⓑ 3 , - 2 ⓒ 1 , - 2 ⓓ 3 , 1

51 Twelve less than three groups of y.

ⓐ 12 - 3 y ⓑ 3 y - 12 ⓒ y - 3 (12) ⓓ 12 (3) - y

52 Subtracting three times a number from two.

ⓐ 3 r - 2 ⓑ 2 - 3 r ⓒ 3 (2 - r) ⓓ 3 (r - 2)

53 Twice a number more than 8 .

ⓐ 2 x + 8 ⓑ 2 (8 + x) ⓒ 8 + x ⓓ 2 x - 8

54 The best subset of the number 0 is .... numbers.

ⓐ counting ⓑ natural ⓒ integer ⓓ rational

55 The distance between - 3 and its opposite on the number line is .... unit(s)

ⓐ 3 ⓑ 0 ⓒ 6 ⓓ 12





QUESTION 2 Complete.

Draft

1. The L.C.M of 3 and 5 is ....
2. The L.C.M of 6 and 12 is ....
3. The G.C.F of 15 and 30 is ....
4. The common factor of all numbers is ....
5. The common multiple of all numbers is ....
6. 6 (3 + 5) = 18 + ...
7. 5 × 3 + 5 × 7 = 5 (.......... + ...)
8. In the opposite Venn diagram, the L.C.M is ...., and the G.C.F is ....

   (Venn diagram: left only: 2; intersection: 5, 2; right only: 5)

9. $7\frac{1}{5} + 1\frac{2}{3} =$ ....
10. $9\frac{1}{6} - \frac{2}{3} =$ ....
11. $3 - \left|-1\frac{2}{5}\right| =$ ....
12. $\left|2\frac{2}{3}\right| \div \left|-1\frac{1}{3}\right| =$ ....
13. 206 ÷ 8 = ...
14. 2424 ÷ 24 = ...
15. 2025 ÷ 25 = ...
16. The G.C.F of 8 and 16 is ....

17 The smallest natural number is ....

18 The greatest non-positive integer is ....

19 The additive inverse of $\left| -2\frac{2}{5} \right|$ is ....

20 The opposite of - (- 1) is ....

21 The opposite to zero is ....

22 The number of integers between -2 and 3 is ....

23 $\frac{15}{3}$ .... to set of counting numbers. Write "belongs" or "dose not belong"

24 Write the correct sign "< , = or >"

a) -3 .... -10

b) -100 0

c) – (– 2) .... – | – 2 |

d) $-1\frac{2}{5}$ .... $-\frac{7}{5}$

25 If | x | = 1 then x = ... or ....

26 If | x | = 3.03 then x = ... or ....

27 If | – 3 | = x , then x = ...

28 If | – 5.3 | = x , then x = ...

29 The sum of twice a number and 7 is ....

30 The verbal expression for "2y – 2" is ....

QUESTION 3 Essay questions.

1 From the opposite Venn diagram, complete:

X: 5, 2 | X∩Y: 5, 2 | Y: 3

(a) The value of x is ....

(b) The value of y is ....

(c) G.C.F is ....

(d) L.C.M is ....

2 From the opposite Venn diagram, complete:

The prime factors of x: 3, 2 | common: 2 | The prime factors of 50: 5, y

(a) The value of x is ....

(b) The value of y is ....

(c) G.C.F is ....

(d) L.C.M is ....

3 Use the Venn diagram to find: G.C.F and L.C.M of 35 and 42

....

....

....

4 A factory produces 875 pieces of cloth weekly. How many pieces did the factory produce daily ?

....

....

....

....

5 A merchant paid 2,000 L.E. to buy 16 boxes of mango. Find the price of each box and if each box contains 5 kg of mango , find the price of each kg.

....

....

....

....

6 Samir ate $\frac{1}{4}$ of the cake and Seif ate $\frac{1}{3}$ of the same cake. How much of the cake has been eaten ?

....

....

....





7 Arrange the following from least to greatest.

a) $-5 , 0 , -4 , 4 , -9 , 3$

....

b) $5 , 0 , -\frac{7}{2} , \frac{5}{2} , -9 , -2\frac{1}{4}$

....

8 Arrange the following from greatest to least.

a) $-\frac{7}{12} , -\frac{7}{2} , 2\frac{1}{2}$, zero , $\frac{3}{4}$

....

b) $\frac{3}{5} , -\frac{7}{10} , -\frac{5}{4} , 0.4$, zero

....

9 Find three rational numbers lies between :

a) $\frac{3}{4}$ and $\frac{4}{5}$

b) 3.2 and 3.23

....

....

....

10 Write the algebraic expression which represents:

Ahmed is x years old now , how old will he be after 6 years ?

With My Best Wishes ☺



QUESTION 1 Choose the correct answer.

1) c	12) d	23) a	34) a	45) c
2) d	13) b	24) b	35) d	46) a
3) a	14) d	25) b	36) b	47) b
4) a	15) a	26) b	37) c	48) d
5) b	16) c	27) c	38) c	49) c
6) b	17) d	28) b	39) b	50) c
7) b	18) c	29) c	40) a	51) b
8) b	19) a	30) d	41) d	52) b
9) d	20) c	31) b	42) d	53) a
10) a	21) a	32) c	43) d	54) b
11) d	22) b	33) b	44) c	55) c

QUESTION 2 Complete.

1) 15

2) 12

3) 15

4) 1

5) 0

6) 30

7) 3 + 7

8) 100 , 10

9) $8\frac{13}{15}$

10) $8\frac{1}{2}$

11) $\frac{8}{5} = 1\frac{3}{5}$

12) 2



13) 25 R 6

14) 101

15) 81

16) 8

17) 0

18) 0

19) $-2\frac{2}{5}$

20) -1

21) 0

22) 4

23) = 5 belongs

24) a) > , b) < , c) > , d) =

25) -1 or 1

26) -3.03 or 3.03

27) 3

28) 5.3

29) $2x + 7$

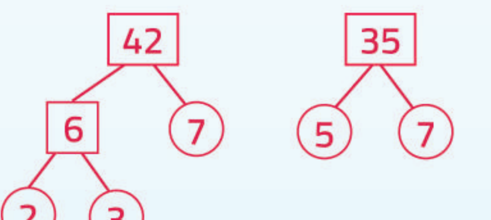
30) Twice a number y decreased by 2 (The answer may vary)

Question 3 Essay questions.

1) a) $x = 100$, b) $y = 30$, c) G.C.F = 2 × 5 = 10 ,
d) L.C.M = 2 × 5 × 2 × 5 × 3 = 300

2) a) $x = 12$, b) $y = 5$, c) G.C.F = 2 ,
d) L.C.M = 2 × 2 × 5 × 5 × 3 = 300

3)



2, 3, 7, 5

G.C.F = 7

L.C.M = 2 × 3 × 7 × 5 = 210





4) The number of pieces = 875 ÷ 7 = 125 pieces

5) The price of each box = 2000 ÷ 16 = 125 L.E.

The price of each kg. of mango = 125 ÷ 5 = 25 L.E.

6) What left of the cake is : $1 - \frac{1}{4} - \frac{1}{3} = \frac{5}{12}$ of the cake.

7) a) The order is : -9 , -5 , -4 , 0 , 3 , 4

b) The order is : -9 , $-\frac{7}{2}$, $-2\frac{1}{4}$, 0 , 5

8) a) The order is : $2\frac{1}{2}$, $\frac{3}{4}$, zero , $-\frac{7}{12}$, $-\frac{7}{2}$

b) The order is : $\frac{3}{5}$, 0.4 , zero , $-\frac{7}{10}$, $-\frac{5}{4}$

9) a) $\frac{3 \times 5}{4 \times 5} = \frac{15}{20} = \frac{150}{200}$, $\frac{4 \times 4}{5 \times 4} = \frac{16}{20} = \frac{160}{200}$

So; $\frac{151}{200}$, $\frac{152}{200}$, $\frac{153}{200}$ are between $\frac{3}{4}$ and $\frac{4}{5}$

(The answers may vary)

b) 3.200 , 3.230

So; 3.201 , 3.202 , 3.203 are between 3.2 and 3.23

(The answers may vary)

10) He will be : x + 6 years old